

SOLID WASTE  
ADVISORY TASK FORCE

Report to Board of Selectmen

February 19, 2013



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## EXECUTIVE SUMMARY

The Town of Chatham will soon be faced with a substantial increase in the cost of trash disposal. The current 20 year contract with SEMASS will expire on December 31, 2014. Prior to that time the Town will need to sign a new municipal solid waste (MSW) contract with SEMASS or some other waste disposal company. It is likely that the initial cost per ton will more than double with a price escalator of 2-3% per year over the course of any new contract. In addition, factors such as trucking, equipment costs, and recycled material market rates will fluctuate and affect the town's cost.

In view of this change the Board of Selectmen (BOS) set up a Solid Waste Advisory Task Force (SWAT) to **“evaluate potential future solid waste and recycling disposal options for the Town of Chatham in an effort to increase recycling, offset future solid waste disposal costs, and to present these options to the BOS with the Task Force recommendations”**.

SWAT members interviewed many knowledgeable people from public and private sources, reviewed experiences in other towns, and did extensive research on a number of possible options and MSW models.

A majority of the members of the Task Force agreed that a “pay as you throw” (PAYT) program would more likely reach the goals set by the BOS and the Town's Long Range Comprehensive Plan. PAYT has been demonstrated to be effective in towns that have already adopted the model. It would mean a cultural change for residents and would require a great deal of education through media and public forums. However, the Town would be able to reduce its disposal cost by increasing its recycling rates. Some residents might experience an increase in household annual disposal expenses, but most, depending on family size, would save money in the long term. PAYT is a user-based program. It is a program supported by MA DEP and the EPA.

A minority of the members of the Task Force recommended keeping the current system of annual sticker fees and increasing compliance with the Town and State solid waste ban. The goal of the program is to increase the recycling rate as much as is efficiently possible, thereby negating the need to increase sticker prices to cover future costs. A successful implementation of this plan could result in sticker price reduction. In a worst case scenario, where recycling is not sufficiently increased, there could be an initial increase of \$24 per household. Increased enforcement would require the use of a “garbage monitor” to determine compliance with current waste bans. By diverting recyclables from the waste stream, recycling rates would improve, thereby reducing the cost of solid waste disposal. Increased enforcement efforts would require additional personnel at the disposal building. A period of warnings and education would be followed by a system of fining to deter those who do not recycle. In addition, improvements to the Transfer Station operations would

lead to better record keeping and efficiencies that will allow further cost savings to the town. If enforcement and other efficiencies do not significantly increase recycling, the increase of MSW disposal should be funded by an increase in the residential sticker fees, commercial hauler fees, or the tax rate.

Municipal Solid Waste management is a very complex issue and often consensus on the management solutions is difficult. While the Task Force is not unanimous in its recommendation for revamping the town's disposal program, there are seventeen action items that the Task Force did agree on unanimously. These include installation of computer/internet capability, increased enforcement of waste ban regulations, updates and improvements including modernization of infrastructure, and the utilization of compactors for plastics.

Either option presented in this report will require further research and refinement of the details of implementation including, but not limited to, timeline, impacts on fees, program administration, impact on commercial hauler operations and rates, staffing, long-range fiscal planning, and enforcement mechanisms. Some of these issues will be difficult to determine until the ongoing SEMASS negotiations are completed. The goal of either option is to increase recycling rates while decreasing municipal solid waste and managing costs.

# Introduction

## Solid Waste Advisory Team (SWAT): Origin, Mission and Members

### A. Background

Currently Chatham's solid waste is trucked 55 miles to the Covanta SEMASS facility in Rochester, MA, for waste to energy. SEMASS (Southeastern Massachusetts Resource Recovery Facility) is one of seven (7) municipal waste combustors in the State authorized by MA State DEP. Under the current 20 year contract with SEMASS, the Town is paying \$37.51 per ton **tipping fee** plus trucking cost of \$20 per ton for a total of \$57.51 per ton. However, the contract with SEMASS expires on Dec. 31, 2014 and the new contractual per-ton charge is expected to be significantly higher as much as \$70 to \$90.

The Board of Selectmen established the Solid Waste Advisory Taskforce (SWAT) in November 2011 to investigate the town's current practices and to advise the Selectmen on possible actions by the Town to offset these increased costs.

### B. SWAT Charge

The purpose of the Solid Waste Advisory Taskforce is:

*To evaluate potential future solid waste and recycling disposal options for the Town of Chatham in an effort to increase recycling, offset future solid waste disposal costs, and to present these options to the Board of Selectmen with the Task Force's recommendations.*

The above mission is in compliance with the Town's Comprehensive Plan which states:

*"Goal – Solid Waste Management. Provide an efficient and economical system of solid waste disposal.*

*A. Expand recycling program to reduce the cost of solid waste disposal.*

*1. Encourage recycling by private solid waste collection companies.*

*2. Continue and expand public education efforts to encourage increased recycling, especially at rental properties."*

### C. SWAT Members

The Selectmen appointed Paulette Fehlig, Ted Whittaker, Ira Seldin, Luther Bates, and Darren Saletta. At the first SWAT meeting on February 23, 2012 the following officers were elected: Paulette Fehlig, Chairperson; Ted Whittaker, Vice Chairman; Ira Seldin, Clerk.

Town staff: Jeff Bremner, Foreman, Town Transfer Station; Judith Giorgio, Health Agent; and Kristin Andres, Conservation Agent were designated by the Town Manager to be the Town staff liaisons. DPW Director Jeff Colby regularly attended meetings of SWAT following his return from military service. Board of Selectmen Chairman Florence Seldin is the Board of Selectmen liaison.

# Chatham Today

## **Demographics**

Chatham is a small town located at the elbow of Cape Cod, MA, having approximately 16.2 square miles of land.

As of the 2010 census, Chatham has a year-round population of 6,125 residents with an average age of 58.9 years. 12.2% of the population is under age 18, 18.7% is between age 18-44, 31.5% is between age 45-64, and 37.7% is over age 65. The current trends show that the population of younger residents is declining and the population of older residents is increasing.

In 2010 there were 3,460 year-round households, of which 3,085 were occupied. Of these, 1,776 were family households (57.6%) and 1,309 were non-family households (42.4%). The average household size was 1.95 persons. 626 people age 65 and over lived alone (20.3%). The current trends show that the number of smaller non-family households is increasing.

Chatham is comprised predominantly of owner-occupied households. Of the 3,085 occupied households, 2,389 were owner-occupied in 2010 (77.4%), and 696 were renter-occupied (22.6%).

Chatham is comprised predominantly of single-family detached homes. Of the 7,343 total housing units, 6,505 were single-family detached structures (91.5%), with the small remainder being multi-family properties.

Seasonal and occasional residents occupy 3,883 households, more than half of Chatham's 7,343 total number of housing units. The current trends show the percentage of seasonal and occasional residents to be increasing.

The median income in 2010 was \$65,990. Almost 1/5 of households earned less than \$35,000, and almost 1/3 of households earned in excess of \$100,000. [all data from the 2010 US census]



## **Transfer Station**

The Town signed the contract with **SEMASS** in 1985 and the Transfer Station and Recycling Center came on line in 1989. Today, the Transfer Station operates alongside the capped landfill as a collection and distribution facility using a flat fee structure. Any town resident may access the facility by purchasing a permit and affixing a vehicle sticker. Resident permit household solid waste is brought to the facility and deposited into a large metal collection building (often referred to as “the blue building”) through side access doors. In accordance with MA DEP regulations, the TS is regularly inspected (see appendix A).

Patrons may also elect to pay per bag for disposal without purchasing a permit. Private solid waste hauling companies pick up waste from customers’ homes and dump into the building after being weighed at the gate. Once inside the building, the waste is pushed by a large front-end loader into a town-owned 115 yard semi-trailer that is positioned in a recessed area of the floor for convenient loading. After being loaded into the trailer, the waste is compacted mechanically with the loader until the trailer is filled to volume capacity, with an approximate weight of 23 tons. At this point, the current trucking contractor, using their truck, hauls the full trailer to SEMASS, a **waste-to-energy plant** in Rochester, MA that burns trash to make electricity.

Chatham also accepts other waste at the Transfer Facility on a fee-based system. It is important to note that the MA Department of Environmental Protection (MA DEP) by regulation (310CMR 19.017), prohibits the disposal of certain items in municipal solid waste. These **waste ban** items require special treatment and often involve a fee to a specialized vendor for proper disposal. Items currently banned by the DEP include:

- Asphalt pavement, brick and concrete;
- Cathode ray tubes (CRTs include computer monitors, TVs)
- Electronic waste (computers, printers, stereo, etc...)
- Ferrous and non-ferrous metals
- Glass and metal containers
- Household hazardous waste (mercury, pesticides, lithium/NiCad batteries, etc.)
- Lead acid batteries (auto)
- Leaves and yard waste
- Recyclable paper, cardboard, boxboard
- Plastics
- Wood and wood waste
- White goods (large appliances, propane tanks)
- Whole tires

Chatham accepts many of these waste ban items, as well as others, for recycling at the Recycling Center area of the facility. Any resident with a Transfer Station permit may recycle for free, or may purchase a Recycling Only permit for a nominal fee. Household Recyclables include:

- Cardboard
- Mixed paper including newspaper, magazines, phonebooks, bags, junk mail, boxboard, etc.
- # 1-7 plastics
- Glass containers
- Rigid plastics
- Aluminum & tin cans
- Metal / items with metal

These household recyclables are sorted by patrons upon drop-off into various separate containers. The materials are then mechanically compacted by the loader and trucked off site by town staff in the town's roll-off truck to be sold at market price.

Other waste diversion collections include:

- Fluorescent bulbs & mercury containing items
- Used motor oil
- Car batteries
- Redeemable glass bottles (CHAMP House – a non-profit group)
- Redeemable plastic & aluminum cans (local Scout troops)
- Clothing, rags, and other textiles (non-profit bins – Salvation Army & American. Red Cross, and a third bin, Bay State Textiles, that pays the town \$100 per ton)
- Paints & paint products (seasonally at the paint shed)
- Electronics
- Books, albums, music (Got Books Bin)
- Fishing Gear (gill nets, etc.)
- Gift Shop
- Yard waste / Composting

Some of these collections are for the purpose of removing pollutants from the waste stream, as required by the Waste Ban Regulations, such as mercury that occurs in fluorescent tubes and button batteries, lead and other toxic wastes. Many equate to significant tonnage that is diverted from the waste stream to SEMASS.

Redeemable plastic bottles and cans are separated and placed into an onsite trailer for donation to the local Boy Scout and Girl Scout Troops. The paint shed, open in warmer weather, is where residents may leave and take useable paint. At the seasonal 'gift shop,' residents may leave and take gently used items for reuse. Household yard waste (leaves and grass clippings only) may be dropped off free of charge year 'round. This waste is composted on site and periodically sifted into rich compost material available for free to anyone with a sticker. Additionally, a free kitchen scrap composting pilot program is currently available in the Recycling Area.

Some items require special handling and therefore there is an additional charge for disposal which varies depending on the item. These items include:

- C & D (Construction & Demolition debris)
- CRTs (cathode ray tubes) – TVs, Computer Monitors
- Woody brush
- Appliances including dehumidifiers, A/C units, refrigerators, etc.
- Mattresses & box springs
- Furniture
- Carpeting
- Grills, propane tanks
- Ceramics, Plate Glass

Chatham currently charges by the ton for Construction and Demolition debris (C&D), which is loaded into a trailer and trucked off site to a C&D recycling/recovery facility. Chatham also charges by the ton for concrete and other non-combustibles, for metal items such as broken lawnmowers, for carpet, and for woody brush. Chatham charges by the piece for mattresses and box springs, sofas and chairs, TV's and monitors, tires, appliances, grills, bikes, propane tanks, toilets, etc..

While some of the materials collected for recycling bring in revenue to the Town such as scrap metal and cardboard, it must be noted that the market price of these recyclables varies greatly – sometimes month to month - and therefore is not a dependable revenue stream.

Currently, there are five (5) full time employees, including a foreman, the gate attendant, and three equipment operators, and one (1) temporary employee.

## **Waste Generated from Town Operations**

MA DEP estimates for all communities that the waste generated from town services represents 10% of the total municipal waste.

### **Town Buildings:**

The Town of Chatham generates trash through its several town buildings including the governmental office buildings, Community Center, Council on Aging, schools, police and fire stations. The trash from these town buildings is currently picked up by local commercial haulers on contract with the Town. The haulers in turn, pay by the ton to dispose of the trash at the TS.

Although recycling occurs within various town buildings, it is limited. White paper is collected in a few of the office buildings via a contract with a local hauler. Other recyclables in some buildings are picked up by town staff. There is not a consistent efficient recycling program within all of the town buildings.

### **Public Areas:**

Public trash bins provided by the Town at public areas, such as the beaches, parks, and Main Street are picked up by town trucks. The tonnage from the public trash bins has been as much as 20 tons in the month of July. The average tonnage in peak months is 10 tons. In the winter months, the average is 1.5 tons which reflects the seasonality of visitors. On average, the Town collects and disposes of approximately 52 tons per year from its public trash receptacles.

Public recycling bins remain minimal and typically seasonal. Historically, the first recycling bins were placed at the light house overlook. A very limited number have been added over recent years. However there are still no recycle bins at the beaches, along most of Main Street, or other popular locations. Obstacles to adding public recycling bins include the cost of bins, the added labor in handling and sorting of recyclables, and contamination of recyclables.

## **Commercial Haulers**

Residents and businesses preferring not to purchase a permit/sticker to utilize the Transfer Station and Recycling Center on their own have the option of hiring a private commercial solid waste hauling company. There are two local commercial haulers based in Chatham. Several other companies also service the Cape. Commercial haulers are obligated under Board of Health (BOH) regulations to get a license from the BOH (currently \$125) to be able to travel the roads of Chatham for refuse pickup or dispose at the Chatham TS. However, there is no reporting required and this was identified as being a difficult regulation to enforce.

These private companies contract directly with customers for regular trash pickup at the customer site, usually on a weekly or bi-weekly schedule. The cost varies, but an average charge for a pick up is \$12-\$14. They provide bins and containers, and drive in specialized compacting trucks from house to house on a scheduled route to gather trash and some recyclables. Currently Chatham accepts the material from commercial haulers at the Transfer Station. Private trucks are weighed upon entering the facility, dump their material inside the collection building, and are weighed upon exiting. The private haulers currently pay \$70/ton to dispose of solid waste.

It is estimated that waste from commercial haulers constitutes 57% of the total waste stream the TS deals with. Some towns, such as Sandwich and Brewster have closed their transfer stations to commercial haulers to reduce the size of their TS operation. However, town staff suggests that commercial haulers can play a key role in reducing overall waste by increasing the recycling rate of their customers.

Currently staff is running a pilot program with the two local haulers, offering them **single stream recycling**. This pilot program is an attempt to work out the logistics at the TS; make it easier for the commercial haulers to reduce the amount of waste being trucked to SEMASS and recycle more; AND to comply with DEP Waste Ban regulations.

## **Disposal Contracts**

Chatham is currently under contract with SEMASS for solid waste disposal, paying a \$37.51/ton 'tipping fee' for all waste. This tipping fee is currently subsidized by the **Massachusetts Technology Collaborative (MTC)** such that the actual cost is approximately \$30/ton for waste disposal.

Chatham is under contract for solid waste trucking, paying \$337 per truckload plus a round-trip fuel surcharge of approximately \$100-\$120 that fluctuates with the price of fuel, for a total of approximately \$450/trip. In 2011, the average truckload contained 22.5 tons of waste. The cost per ton of trucking the solid waste is approximately \$20/ton.

Therefore, the total cost to the Town of disposing the waste is approximately \$50/ton. This figure does not include the cost of the Transfer Station employee time spent on preparing the loads, maintenance costs, transfer station operations.

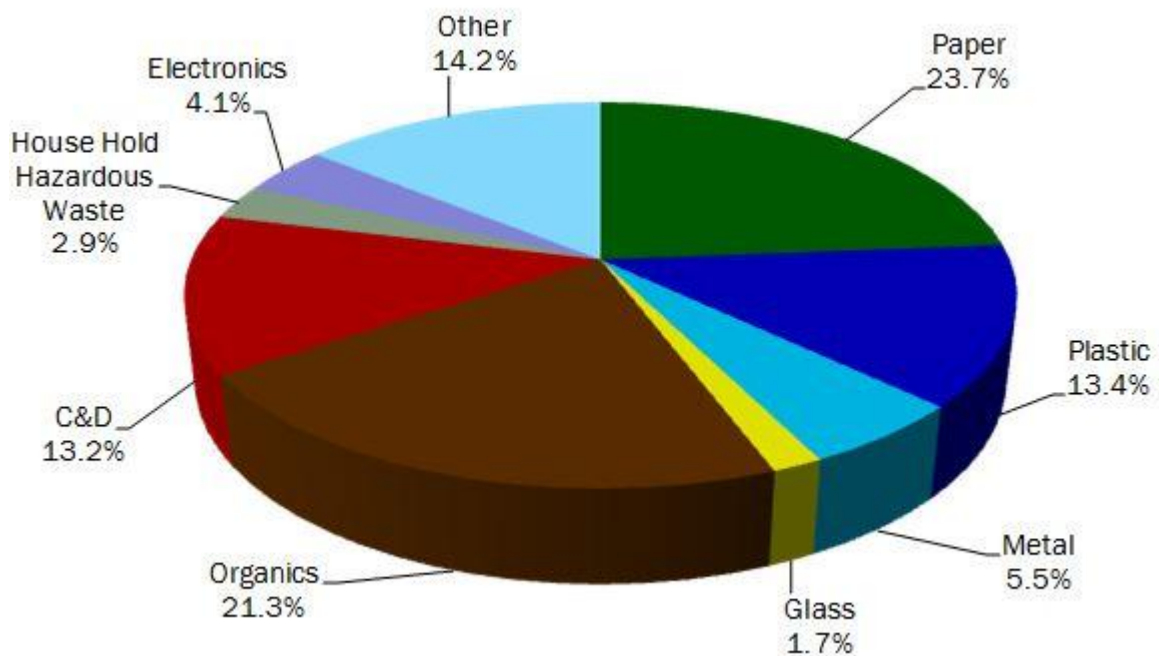
The contract with SEMASS was signed on January 1, 1985 and is due to expire on December 31, 2014. Based on recent contract signings in other neighboring towns, the cost of the tipping fee is expected to increase dramatically, possibly approaching \$80/ton. The MTC subsidies are also expected to end upon signing of a new contract. Further, there is an indication that a new SEMASS contract may contain a price escalator clause that would have the effect of increasing the tipping fee each year of the contract. Recent negotiations between SEMASS and the Cape Cod Commission, representing a group of Cape Cod towns, have suggested the possibility of a rate lower than \$80/ton. One of the first to sign a new contract with SEMASS was Brewster, who signed a 20 year contract in 2010 for \$45 per ton for 2011-2014, and in 2015 it will be \$70 per ton with a 2.5% annual increase.

Chatham has options for disposal other than SEMASS. Recent **RFQs** (Request for Quotations) indicate the possibility of contracting with a different company for solid waste disposal (see chart in Appendix B).

The current trucking contract began July 1, 2009 and is due to expire June 30, 2014. Based on figures from recent proposals, the Town can expect a decrease in the trucking contract cost by negotiating with other vendors for a more competitive price. The current county bid for hauling is less and there may be a savings realized. Ultimately, each town will make its own contractual agreements.

## **What Do We Throw Out?**

3800 Chatham households, serviced by the TS, produce 2,336 tons of trash per year at the Transfer Station. This equals 0.62 tons or 1240 pounds per household -- 620 pounds per person (assuming an average household size of 2 based on census data). <sup>1</sup> (This does not include the additional 3100 tons brought to the TS from commercial haulers for which there is no information of the breakdown of that waste).



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\*Above figure is based on a SEMASS study. <sup>2</sup>

## **Chatham Solid Waste Disposal<sup>3</sup>**

### **2011 Tonnage Data**

Total Municipal Solid Waste (MSW)

- **Residential MSW** – 2336 tons
- **Commercial MSW** – 3100 tons

**TOTAL: 5436 tons**

Recyclables

- “Core” recyclables (mixed paper, cardboard, steel/tin, aluminum, glass, plastics, scrap metal, textiles, book) – 1183 tons
- Compost (leaves & grass) – est. 1250 tons
- Household Hazardous Waste – est. 54 tons
- Construction and Demolition – 575 tons
- Brush – 421 tons

**TOTAL: 3,483 tons**

## **Transportation Costs**

### **2011 MSW Hauling Costs**

- Direct haul via contractor to SEMASS 115 cu. yd. trailers, 22.5 tons per load
- Hauling cost per load - \$337.50
- Fuel cost per load - \$120

*\*TOTAL MSW HAULING COST = \$20.55 per ton*

### **Core Recyclables Hauling Costs**

- Self-haul (via town trucks) to AAA Recycling in New Bedford (130 miles roundtrip)
- Average 9.1 tons per load (varies by material- a truckload of plastic weighs 1.5 tons and glass weighs 17 tons)
- Fuel cost per trip = \$130

*\*TOTAL RECYCLABLES HAULING COST = \$14.44 per ton (cost includes fuel; town staff time of approximately \$100 is an additional cost per trip based on 4 hours of travel @ \$25 per hour)*



## **Residential TS Sticker Receipts**

**Households Served – An estimated 3800 households use the TS to dispose of their trash**  
Transfer Station Stickers Sold in calendar year 2011

- 1<sup>st</sup> car TS stickers @ \$110 ea - 1,028
- 2<sup>nd</sup> Car TS stickers @ \$20 ea - 462
- 1st Car Combo stickers @ \$135 ea [COMBO includes parking at beaches] – 2,577
- 2<sup>nd</sup> Car Combo stickers @ \$40 ea – 1,055
- Recycling Only stickers @ \$5 ea - 883

*Some households and visitors don't buy a TS sticker and instead pay \$2.00 per bag to dispose of trash at the TS. (There is no exact count of Households who "pay-per-bag" – estimate: 195)*

***TOTAL REVENUE FROM STICKERS PER FISCAL YEAR 2011\*- \$419,945***

## **Fiscal Year 2011**

(\*2011 was latest complete set of figures at the time SWAT began its review)

### **Expenses**

Personnel	\$ 363,905
Services	\$ 20,991
SEMASS tipping	\$ 166,457
SEMASS trucking	\$ 111,710
Recycling Expense*	\$ 94,847
Scale Repairs	\$ 2,080
Ad	\$ 27
Print	\$ 1,279
Op supplies	\$ 14,749
Vehicle maintenance	\$ 22,941
Dues, etc.	\$ 1,234
Monitor	\$ 8,930

<b><u>Total Expense</u></b>	<b><u>\$ 809,132</u></b>
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* Expense incurred for vendor pickup of recyclables, CRTs, Brush, for which there is no market.
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## **Revenue**

Commercial (Includes commercial tip fee & bulky waste fees)	\$ 245,561
Gate (Includes per bag fees and bulky waste fees)	\$ 160,786
TS Permits (TS only permits - 1 <sup>st</sup> , 2 <sup>nd</sup> & replacement)	\$ 125,305
Combo Permits (TS portion of combo permits -1 <sup>st</sup> , 2 <sup>nd</sup> & replacement)	\$ 290,480
Recycling Revenue	\$ 70,746
Recycling Only Permits	\$ 4,160

<b><u>Total Revenue</u></b>	<b><u>\$ 897,038</u></b>
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NET INCOME:                      + **\$87,906**

The transfer station has consistently met its budget and all revenues generated are deposited to the General Fund. Although there has been a surplus each year, the market for recyclables is volatile and the return generated is uncertain. Therefore, the surplus was not taken into account in the projected costs /calculations.

## **Public Outreach & Education**

The main form of communication with the public about recycling at the Transfer Station has been the Transfer Station employees and the Transfer Station's webpage on the town website. Signage at the transfer station plays a critical role and is often updated and improved.

Over recent years, an ad hoc workgroup, ChathamRecycles, has worked on a public awareness campaign. A core group of volunteers made up of town staff and citizens, whose goal has been to improve recycling rates in the Town, have held many annual events, sought grants, encouraged the placement of recycling containers in public places, sought to engage the schools, developed a website ([chathamrecycles.org](http://chathamrecycles.org)) and logo which appears on signage at the TS, and one member writes a bi-weekly ChathamRecycles column for the Cape Cod Chronicle. The volunteer workgroup continues to seek ways to improve recycling in the community with little or no funding.

A revolving fund was established for purposes related to recycling. The revolving fund and some town seed money helped purchase recycling totes and compost bins for re-sale.

# S.W.A.T. Process

To implement our mission, SWAT gathered as much research data, reviewed as many case studies, invited as many visitors and considered as many options and details as possible in order to craft informed, responsible, realistic recommendations for the Chatham.

## MEETINGS THROUGHOUT 2012 & early 2013

- Brainstormed, creating a long list of options, both large and small in scope. These items were then discussed, in some cases warranting further investigation, eventually recommending or discarding each.
- Analyzed current revenues, costs and practices at the Chatham Transfer Station (referred to as TS in this report).
- Examined many different scenarios, (eg) effect on Transfer Station costs from various potential SEMASS tipping fee increases.
- Reviewed case studies, and/or presentations by similar committees in, the MA towns of: Sandwich, Barnstable, Wellfleet, Nantucket, Duxbury, Hingham, Needham, Provincetown, Wellesley, Winchester, and Burrillville, RI
- Speakers, stakeholders, and staff were invited to meetings which included the following:
  - Craig Lovett, Capital Paper Recycling
  - Alex Heilala, Chatham Finance Director
  - Mike Maguire, Extension Educator of the Cape Cod Cooperative Extension, Barnstable County
  - David Quinn, Regional Waste Reduction Coordinator, Cape Cod Cooperative Extension, Barnstable County
  - Paul Tilton, Director Public Works & Town Engineer, Sandwich, MA
  - Jill Goldsmith, Chatham Town Manager
  - Florence Seldin, Chairman, Chatham Board of Selectman
  - Tim Milley, owner Milley Trucking
  - Benjamin Nickerson, owner Benjamin T. Nickerson, Inc. Trucking
  - John Craig, Director of Municipal Partnerships, Waste Zero, Inc.
  - Jeff Colby, Chatham DPW Superintendent

## 2012 TRASH MANAGEMENT SURVEY

It was very important for us to get input from Chatham's residents. In order to truly get an idea of specific attitudes and habits we created and distributed a town-wide survey. The survey was developed by the taskforce with input from staff and the county regional waste reduction coordinator.

Hardcopies of the survey were made available at all town office buildings, the library, many local businesses and the Transfer Station as of June 27, 2012. It was online at the town's website. The survey was announced at the Board of Selectmen's meeting and a press release appeared in the Cape Cod Chronicle. It was online at the town's website. Members of SWAT distributed surveys either by hand or electronically to fellow citizens. After four weeks, the surveys received were tabulated at the end of August 2012.

The taskforce acknowledges that there is a science to the creation of surveys and while this survey was created by laypeople, the taskforce believes the results give some insight into the views and practices of the Chatham citizenry relative to solid waste disposal and recycling.

### Summary of Survey Results

There were 351 respondents over the four week period, considered to be a good response and representative of the residents.

The more prevailing results of the Survey are as follows:

- How much do you currently recycle?                      Average response: 50%.
- How much could you recycle?                              Average response: 60%.
- 72% of respondents **do not** compost kitchen scraps.
- What would help you recycle more?  
    Top responses (with #1 being the most popular response):  
    #1: No sorting  
    #2: More info  
    #3: Other: Open Gift Shop more often; Hauler take more recyclables; TS take more recyclables; Curbside pickup
- Which of these future options could you accept?  
    Top responses (with #1 being the most popular response):  
    #1: Increase sticker price  
    #2: Increase enforcement  
    #3: Increase real estate tax  
    #4: Pay Per Bag program

Among the open ended questions (“Other/ please explain”), the most predominant response trends were:

- Why don’t you recycle more?  
Top responses (with #1 being the most popular response):
  - #1: TS doesn’t take everything
  - #2: Hauler doesn’t take everything
  - #3: Would like to compost
  - #4: Gift Shop not open often enough
- Which of these future options could you accept?  
Top responses (with #1 being the most popular response):
  - #1: Make haulers comply
  - #2: Pay per Bag/charge more per bag
  - #3: Enforcement
  - #4: Raise sticker price/ or raise taxes
  - #5 Close TS
- Any other comments?  
Top responses (with #1 being the most popular response):
  - #1: Excellent, well-run TS
  - #2: Make haulers comply
  - #3: Enforcement
  - #4: Single stream recycling
  - #5: Pay per Bag
  - #6: More info, encouragement
  - #7: Curbside pickup
  - #8: Raise sticker price
  - #8: Improve Gift Shop.

#### General Observations on Open Ended Survey Responses

1. **Strong positive response to Transfer Station (TS)** - clean, efficient, friendly and helpful attendants.
2. **Private haulers:** don’t recycle enough.
3. **Strong interest in enforcement.** Recyclers frustrated with non-recyclers.
4. **Convenience** at TS and possibly curbside pickup.
5. **Pay per Bag.** Positive reaction by some, but considerable confusion. Some thought it meant pay per bag of recyclables too.
6. **More education & encouragement needed.** Many answers showed considerable lack of accurate information.
7. **Gift Shop** – request for the gift shop to be open more hours; year-round
8. **Composting** - Numerous respondents wishing to do it at home or at TS.

See appendix C for blank survey, tabulation of survey results, list of responses of all open-ended questions, and summary

## FUTURE EXPECTATIONS

Chatham currently pays a tipping fee to Covanta SEMASS of \$37.51 per ton for all trash from the Town transfer station. This \$37.51 number is misleading in the context of developing a solid waste program on and after FY15. The amount paid by the Town of Chatham for SEMASS services is currently subsidized by grants from the **Massachusetts Technology Collaborative (MTC)**. This subsidy is provided as a credit on each invoice from SEMASS. In FY2011, the Town of Chatham budgeted \$166,457 for SEMASS tipping fees and produced 5436 tons of MSW. This equals an actual cost of around \$30 per ton. The current SEMASS contract and MTC reimbursement program will end in 2015.

A new contract has yet to be signed and, therefore, its terms and tipping fee are unknown. The Town of Chatham and Cape Cod Commission's Solid Waste Advisory Committee are currently talking with several MSW disposal companies, including SEMASS, to develop a new contract. Based on market conditions for MSW disposal in the region, however, it is fair to assume that the new tipping fee will likely start between \$70 and \$80 per ton and contain a price escalator of approximately 2.5% per year. Taking into account the current MTC reimbursement to the Town, this change represents a \$40 to \$50 per ton increase, or \$215,000 to \$257,000 in additional expenses, which will continue to increase each year based on a price escalator.<sup>4</sup>

For example, a tipping fee starting at \$70 with 2.5%/yr price escalator would result in the following tipping fees over a 10-year span:

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
\$70.00	\$71.75	\$73.54	\$75.38	\$77.26	\$79.20	\$81.18	\$83.21	\$85.30	\$87.43	\$89.61

**The Town could cover this additional expense by increasing property tax rates, transfer station user fees, some combination of the two, or through a waste reduction strategy such as pay-as-you-throw.**

Below, is a rough estimate of new fees required if the Town decides to cover new expenses with user fees. Since MSW arrives at the transfer station from both residential permit holders and private haulers, the Town may want to distribute this cost proportionately. Currently, 57% of the MSW disposed at the Chatham Transfer Station is from private haulers.

#### 2011 Disposal and Transportation Costs: <sup>5</sup>

MSW	Tons	Current Disposal Cost*	Current Transport Cost*	TOTAL Transport & Disposal
Residential	2336	\$ 71,531	\$ 48,005	\$ 119,536
Commercial	3100	\$ 94,926	\$ 63,705	\$ 158,631
<b>Total</b>	<b>5436</b>	<b>\$ 166,457</b>	<b>\$ 111,710</b>	<b>\$ 278,167</b>

\*Note: The current disposal cost is calculated using a \$37.5 tipping fee minus the estimated MACT reimbursement, which results in a true cost of approximately \$30.62 per ton; transport cost based on \$20.55/ton.

#### 2015 Disposal and Transportation Costs (with a \$70 tipping fee) <sup>6</sup>

MSW	Tons	2015 Disposal Cost	2015 Transport Cost (Assumed to be constant)	TOTAL T & D
Residential	2336	\$ 163,520	\$ 48,005	\$ 211,525
Commercial	3100	\$ 217,000	\$ 63,705	\$ 280,705
<b>Total</b>	<b>5436</b>	<b>\$ 380,520</b>	<b>\$ 111,710</b>	<b>\$ 492,230</b>
<b>New Costs</b>		<b>\$ 214,063</b>	<b>\$ -</b>	<b>\$ 214,063</b>

If the new tipping fee increases to \$70 per ton in 2015, it would result in \$214,063 in new disposal costs to the Town. This assumes that no new waste reduction program has been put in place and tonnages are consistent with recent years. It also assumes that transportation costs remain stable; in reality, transportation costs may vary from year to year.



In addition, any new MSW disposal contract will likely include a **price escalator**, which will increase the tipping fee annually by a specified percentage. Price escalators in MSW disposal contracts can be set using a fixed percentage or based on a variable index, such as the **Consumer Price Index** (CPI).

The Town of Brewster is the only town in Barnstable County that has signed a new contract with SEMASS at this time. Brewster's contract includes a 2.5% price escalator over a 20-year period. As a result, Brewster's tipping fee will increase from \$70 in 2015 to \$98.91 in 2029.

## **Estimated fee increases:**

### ***Residents (TS permit holders):***

- There are approximately 3800 households currently using the transfer station
- \$91,989 in new costs to transport and dispose of residential MSW
- \$91,989 divided by 3800 households equals \$24 per household
- Beyond 2015, MSW disposal costs may increase and may require future increases to the transfer station permit fees

### ***Commercial Haulers (licensed by Board of Health):***

Commercial haulers currently use the transfer station scale and pay per ton for MSW disposal (\$70). In FY2011, 3100 tons of MSW were delivered to the transfer station from commercial haulers, which generated \$217,000 of revenue. The town paid approximately \$30.50 per ton for disposal, \$20 per ton for transportation, plus staff time to process MSW from commercial haulers, and general TS operation and maintenance. It is difficult to calculate the exact costs to the Town for processing MSW from commercial haulers without more details on staffing costs; however, tipping fees to commercial haulers will need to increase.

## Commercial Haulers

Commercial haulers represent 57% of the Town's solid waste disposal. Since our costs are expected to increase the commercial haulers tipping fee will likely need to be adjusted accordingly. While the haulers provide some recycling it is unknown what percentage of the waste they collect is recycled. Their improved compliance with the state's waste ban regulations will help reduce cost to the Town. In order to control costs, some towns including Brewster and Sandwich, have banned commercial haulers from disposing at their TS facility.

There are two local haulers, valued longtime businesses and members of our community, who provide service to Chatham and to many seasonal residences and rental units. Therefore, town staff has endeavored to facilitate recycling for the haulers through a pilot program, as mentioned earlier in this report, offering them single stream recycling to make it more convenient for them and their customers. While this accommodation cannot continue free of cost to the haulers, the cost of transporting these recyclables from the TS is a small fraction of the per ton cost to SEMASS for SW disposal.

To increase recycling, another possibility is through regulations. As a condition of their permit to dump in Chatham, haulers could be required to offer recycling and trash pickup in a **bundled rate**. This bundled rate approach is a prerequisite to current MA DEP PAYT grants.

An additional relevant point is that there is nothing to prohibit the larger companies, such as BFI, Waste Management, etc. from bringing their SW to Chatham. Given our comparably lower rates and convenience, it is possible that larger companies may be attracted to use Chatham. Other towns have higher dumping fees than Chatham (e.g. \$80.00 per ton in Harwich compared to our \$70 per ton). There is no avenue to prohibit the large companies from utilizing our facilities without banning all commercial haulers, including our local business. *However our commercial rates must cover our cost which includes processing and handling of the waste, \$ 30.00 per ton tipping fee, administration costs and trucking to SEMASS for final disposal.*

We are very grateful that our two local haulers accepted an invitation to visit our SWAT meeting, and we appreciate very much their generous information and candor. As we were able to meet with them only once, we feel further discussion with them about ways to improve recycling is warranted.

## Seasonal Residents and Renters

In a town with a regularly fluctuating population like Chatham, this user-group must be encouraged to recycle more and thereby help stabilize the SW disposal costs of the Town.

We feel this is an area in need of further discussion and that engaging the Chatham Chamber of Commerce, the Town's 3 or 4 largest rental agencies, as well as 2 or 3 local house cleaning companies, would be a valuable start to finding solutions.

## Composting

Leaves and yard waste, accepted at the Chatham Transfer Station, are among the easy-to-recycle (composted) materials that are banned from disposal in Massachusetts incineration facilities and landfills

Composting at home is easy and can reduce one's trash dramatically, but we understand that for various reasons not everyone can do it. Since receiving a DEP grant in 1996, the Town has had a compost bin program, selling bins at a wholesale price.

In the interest of reducing the amount of food materials going to SEMASS, the Chatham TS has a new kitchen scraps composting pilot project. In cooperation with Watts Family Farms (WattsFamilyFarms.com) the program accepts vegetable and fruits scraps, eggshells, bread and coffee grounds (no meat products). The containers for depositing compostable items are located in the recycling area of the TS.

Organics comprise approximately 20% of the weight of our MSW. In support of its goal to increase by 350,000 tons per year the amount of organic material diverted from disposal statewide by 2020, MA DEP promotes residential, commercial and institutional composting, recycling and reuse of grass clippings, yard wastes, food materials and other organics. DEP will be instituting a ban on commercially generated organic materials from large facilities in 2014. (<http://www.mass.gov/dep/recycle/reduce/composti.htm> ).

# Future System Options

The taskforce looked at a myriad of options to reduce the impact of the future increase in tipping fees for MSW disposal to the Town, and ways to increase recycling. After careful review we present the following models for consideration. Each of these options has been the choice for one town or another in the Commonwealth.

## **Status Quo: Do Nothing**

This will result in:

- Increased cost to town for MSW disposal
- No significant increase in recycling
- Increased permit fees or taxes to cover increased tipping fees
- To cover the potential increases in the tipping fees and possible escalator in the new contract, the cost of a TS sticker would have to increase by \$24 starting in FY14

## **Close TS, residents use commercial haulers**

SWAT believes this will result in:

- No significant increase in recycling
- No savings to the town
- Loss of flexibility
- Financial burden on residents (average costs for private pickup \$12-\$14/pickup)
- Loss of jobs at TS
- Financial impact on the two local haulers (e.g. increased competition)
- Change in social aspect of “the dump”

## **Lease TS to third party**

- Cost to town unknown
- Impact on recycling rate unknown
- Potential loss of jobs

## **Town-wide curbside collection (private or town-run)**

- Effect on recycling rate unclear without further study
- Establishing a curbside pickup program would likely require significant upfront capital costs
- Traffic congestion & noise
- Trash at curbside unsightly and can attract nuisance animals
- Change in social aspect of “the dump”

## **Maintain Current System with Improvements to Efficiency:**

- Significant potential cost savings to town
- Increase in recycling rate through enforcement
- No significant startup cost if reallocation of TS staff
- With no increase to Recycling Rate, cost per household could increase \$24 (\$88k worth of garbage monitor salary can be supported at current budget using current \$88k surplus)
- With increase of Recycling Rate to 71.5%, cost per household remains constant
- With increase of Recycling Rate to 90%, cost per household can fall by \$28 (\$108k / 3800 households)
- This option retains all conveniences and services currently provided by the TS

## **Pay-As-You-Throw (PAYT)\***

- Significant potential cost savings to town
- Increase in recycling rate by providing incentive to keep cost down by resident
- Cultural change to residents
- Costs to some residents could increase while costs to others could decrease
- Considered a tax by some, user fee by others.
- Bag or tag system used as enforcement mechanism

\*This program has also been called “Save As You Throw” or Drop-off Town Bag system. PAYT is used throughout the country and is a program supported by MA DEP.

# SWAT's Recommendation for Future System

## TWO ALTERNATIVES

### **Maintain current system with improvements to efficiency**

The Town of Chatham has a civic obligation to all residents to provide a fair and efficient mechanism for disposal of Municipal Solid Waste (MSW). Chatham has a further legal obligation to comply with current state law as enacted by the Mass DEP Waste Disposal Ban Regulations (310 CMR 19.017). The priority for Chatham should be to balance these two obligations while providing residents with an optimal level of service at minimum expense.

Chatham's recycling rate in 2011 was 35%. This DEP figure is determined by comparing the total amount of MSW generated in Chatham to the total amount that is diverted from the garbage stream. Chatham generated 8,345 tons of MSW, comprised of 5,436 tons of garbage that was shipped to SEMASS for disposal, 1,671 tons of yard waste that was composted, and 1,238 tons of 'core' recyclables that were diverted. In 2011, Chatham paid \$166,457 to SEMASS in disposal 'tipping' fees, composted all of the yard waste for no fee (which produced free, nutrient rich compost for residents), and sold the recyclables for \$70,746.

Following the expiration of the current SEMASS contract, Chatham can expect to negotiate an increased tipping rate to a similar level as the Town of Brewster, which contracted with SEMASS for MSW disposal at \$70/ton to take effect in the year 2015. If Chatham was to contract with SEMASS in 2014 for a tipping rate of \$70/ton, and was to generate the same amount of MSW as in 2011 while diverting recyclables and yard waste at the same rate of 35%, the disposal cost would rise from \$166,457 to \$380,520.

In order to mitigate the effect of the increased tipping rate, Chatham must keep recyclable items out of the blue building. This will immediately lower the garbage disposal cost by reducing the amount of MSW being shipped to SEMASS, and will simultaneously increase revenue by increasing diversion of recyclables that can be sold for additional revenue. Diverting 90% of paper and organics currently taken from Chatham and disposed of at SEMASS will improve the overall recycling rate to 61%. Chatham can entirely eliminate the effect of a \$70/ton tipping rate by increasing the recycling rate to 71.5%.

A simple, efficient, and cost-effective method to accomplish this is to establish, implement, and adhere to a systematic plan to undertake some minor immediate changes using our existing system and infrastructure with the goal of increasing the Town of Chatham recycling rate to 90%. Chatham already has established the infrastructure at the Transfer Station that is capable of meeting the civic and legal obligations. Chatham already has Board of Health Regulations prohibiting the disposal of recyclable items. Residents are already familiar with the operation of the Transfer Station. Chatham must implement a system with the objective of

increasing the recycling rate as much as is efficiently possible by utilizing these advantages to maximize recycled tonnage and minimize garbage tonnage in order to keep user fees as low as possible.

Using 2011 figures but with a recycling rate at 90%, MSW tonnage shipped to SEMASS would fall to 834 tons, with a total disposal cost of \$58,413 at a \$70/ton tipping rate. This would result in a cost avoidance of \$322,107 as compared to the 2011 recycling rate of 35%. This would also result in a decrease in total MSW disposal costs to SEMASS of \$108,044 as compared to the 2011 SEMASS costs, even after incorporation of a \$70/ton tipping rate.

Although difficult to project figures due to market volatility, funds generated from the sale of recyclables would be an additional source of revenue. In 2011, Chatham sold core recyclables for an average of \$57/ton.

#### The 90% Goal with Tipping Rate at \$70/ton

##### 1. Digitization & Computerization

- a. Data - All transfer station data must be digitized for ease of data collection and rapidity of analysis. All gate transactions are to be entered into a computer spreadsheet. Transfer station staff must be able to see the results of improvements in order to measure the impact of the change to be able to quickly determine whether the change was effective. This is impractical with handwritten receipts and monthly tally sheets.

##### 2. Increased Attendant Oversight

- a. Garbage Monitor - Establish an employee monitor at the garbage building. The current employee in the gate house is over 100 feet away from the garbage building. There must be a uniformed employee situated directly in front of the disposal windows at the west side of the building. The primary task of the Garbage Monitor is to prevent disposal of recyclables into the Garbage building. Although this position can be immediately established through reallocation of existing staff, a temporary increase in staff during the transition period may be desirable to improve public education and to facilitate program implementation. One full-time employee at \$60,000 annual salary can be funded by the cost avoidance of 857 tons of MSW at \$70/ton. For Chatham, this equates to a 10% increase in the recycling rate, from a 35% recycling rate to 45% recycling rate. Achieving a 90% recycling rate after funding this employee would still result in MSW disposal cost avoidance of \$262,107.
- b. Bag inspections – Construct a work bench style table at the northerly disposal window on the west side of the garbage building. The Garbage Monitor is empowered to conduct an inspection on any bag that is brought to the Transfer Station for disposal into the Garbage



Building. At the discretion of the Garbage Monitor, any bag could be opened on inspection table.

3. Penalties for Non-Compliance-

- a. Recycling compliance – Any recyclable items found during inspection will be returned to the resident for proper recycling.
- b. Fines for violations – Any violation will first be treated as an opportunity for educating the resident on the town policy. Additional infractions beyond the educational period shall be subject to a fine. The City of Philadelphia recently held focus groups to determine what would motivate residents to recycle more and found that the most important driver was the fear of fines. The City implemented a warning-only campaign that resulted in 18% overall increase in recyclable tonnage over 18 months (<http://www.consumersunion.org/other/zero-waste/enforcement.html> ).
- c. 10% Allowance – To allow for mistakes, difficult to recycle items, lack of knowledge, and to otherwise prevent an overly Draconian enforcement system, all bags shall be permitted a 10% allowance of banned items at the discretion of the garbage monitor.

4. Town Education –

- a. Marketing campaign – Orchestrated by town staff and volunteers, Chatham must undertake an aggressive informational marketing campaign to educate town residents and visitors in order to unify the town in embracing the 90% recycling rate goal. All cost-effective and practical town resources should be utilized to quickly and efficiently promote the plan. This must start with a simple public declaration by the Town Manager, followed by corroboration by the Board of Selectmen showing strong support and leadership for the plan. The marketing group should explore and pursue advertising at multiple venues such as on the Public Television station, local newspapers and publications, informational displays at public buildings, and public forums.
- b. Signage at Transfer Station – The entrance/exit road of the transfer station has significant available room for signage that can provide residents with answers to common questions.
- c. Specific Signage at the Garbage Building – Install a large building sign identifying the blue building as the ‘Garbage Building’.
- d. School System – Chatham must implement an improved recycling program in the schools that educates our youngest residents and ingrains the 90% recycling rate attitude from an early age. If Chatham targets education of this age group, there will soon be an entire generation of educated recyclers.

5. Town of Chatham Compliance

- a. Town Buildings – all town offices, PD, FD, Schools, Community Center, library, council on aging, etc., must have an established recycling system in place. Currently only limited recycling is done in these town buildings. All other materials are picked up by a commercial

hauler and disposed into the garbage building. Chatham must lead by example and show a commitment to reducing MSW by instituting a town-wide policy of mandatory employee recycling. Because these buildings utilize a hauling service, no data is available on volume of trash.

- b. Recycling containers – all town trash barrels must be paired with a recycling barrel. Stand-alone trash barrels provide no alternative option for recycling and encourage improper disposal. The Parks and Rec Department picks up an estimated 54 tons of trash annually from public barrels at various locations around town, at beaches, the Fish Pier, town landings, etc. Achieving a 90% recycling rate would decrease MSW by 47 tons and result in a \$3200 cost avoidance.

6. Commercial Hauler Compliance

- a. 90% Standard – Commercial haulers would be required to adhere to the 90% recycling rate standard. Any incoming load would be subject to inspection by the Garbage Monitor. Any load containing waste ban items in excess of 10% would be rejected.
- b. Commercial Rate – The rate charged to dispose of commercial MSW must be increased to reflect the higher SEMASS tipping costs. The rate is currently \$70/ton, which exceeds the direct cost to Chatham for disposal and trucking by \$20/ton. Part of this extra revenue covers the cost of employee and equipment time spent handling the volume of the commercial garbage. Maintaining this \$20/ton extra revenue at a \$70/ton tipping rate plus the trucking costs would require a new commercial charge of \$110/ton.
- c. Single/Dual Stream mitigation – To reduce the severity of the impact to the local commercial hauling companies, Chatham must continue to explore a program that accepted single or dual stream recycling from haulers. This would enable the commercial haulers to delay the substantial costs of new equipment investment that would be required to pick up sorted recycling.

7. Examine Transfer Station Recycling protocol

- a. Multi stream – The current system requires residents to sort out their household recycling into various individual receptacles for each recycling product. Although this practice requires additional effort beyond single or dual stream recycling where all recyclables are commingled, the town is rewarded by substantially higher revenues due to higher prices on clean and sorted recyclables. Cardboard and tin cans, for example, can sell for over \$200/ton when properly sorted. When commingled, the price falls to \$5-15/ton. Chatham is benefiting financially from users sorting their own recyclables.
- b. Single/Dual stream – Chatham should perform an analysis on whether it would be more financially prudent to eliminate the sorting requirement for household recycling. Upon investigation and data analysis of the 90% system, it may be that the transfer station employee labor cost of handling the sorted material may exceed the

added value of the higher price of sorting. This would be a strong reason to change to a single or dual stream recycling system where all recyclables are commingled in one receptacle.

8. Explore new cost savings measures by performing cost/benefit analysis
  - a. Compactors – Compactors can increase the tonnage of material that fits into a container by decreasing the volume. For example, a truckload of recyclable plastic would ordinarily hold approximately  $\frac{3}{4}$  ton of material, resulting in a MSW disposal cost avoidance of about \$50. Transfer station staff currently mechanically compact this material with heavy equipment that increases the weight capacity of the same container to 1.5 tons. This mechanical compaction will achieve a total cost avoidance of approximately \$100/load but requires an expenditure of staff labor and equipment time. The current estimate is that an electric compactor could increase the weight capacity to approximately 5 tons, increasing the cost avoidance to a total of \$350/load. In 2011, Chatham diverted 51 tons of plastic. Using this same figure, but keeping in mind that it will necessarily increase as the recycling rate increases, Chatham would save \$2500/year. This type of calculation can be performed with all other receptacles at the transfer station, including garbage. Further investigation is required regarding material compaction capacities, as well as the cost of purchasing and installing a compactor, including availability of applicable grants, in order to reach a prudent fiscal decision on acceptable payback period of any compactor investment.
  - b. Automation – Pay-for-use fees, such as construction debris or CRT disposal that is currently collected at the transfer station, can be collected using an automatic system. Inexpensive technology currently exists in the form of Mobile SpeedPass and Mass DOT Toll Readers that will read a small and inconspicuous vehicle transmitter and apply the appropriate fee to a charge or credit card account. Other towns utilize self-service ‘vending machine’ style kiosks to pay for items such as mattresses. An analysis on the costs and savings to automate the commercial scale should be performed.
  - c. Improve Transfer Station Layout – An analysis of the cost savings of changing the traffic flow of the transfer station should be performed. Moving the gate house closer to the garbage building and the Pay-for-use fee areas may assist with more efficient oversight. Diverting traffic through the Recycling Center first would encourage all users to think about recycling before disposal.

It is financially prudent, fiscally responsible, state law compliant, and community friendly to utilize the existing system and infrastructure that Chatham already has in place. Establishing simple improvements and other sensible practices will reduce the impact of the escalating cost of MSW disposal while maintaining the conveniences of a user-friendly facility.

Locally, in 2008, the Town of Nantucket generated 21,405 tons of MSW, comprised of 1,918 tons of garbage, 2,433 tons of yard waste that was composted, and 16,947 tons of 'core' recyclables that were diverted. Their recycling rate was 91%. If Nantucket can do it, Chatham can do it too.

Nationally, Seattle has found that enforcement of their mandatory recycling program has been easy to implement and had successful results (<http://www.seattlepi.com/local/article/Mandatory-recycling-program-working-well-1198413.php>). The city of San Francisco has passed laws requiring recycling and composting. It has achieved a 72% recycling rate and is targeting zero-waste by 2020 (<http://earth911.com/news/2009/09/21/mandate-vs-volunteer-what-works-better-for-recycling> ).

Globally, the Australian capital City of Canberra, along with 12 cities in New Zealand, leading corporations like Hewlett Packard, Bell Canada, and Fetzer Wineries, as well as one of the most conservative counties in California have recently adopted a new policy of ZeroWaste ([http://archive.grrn.org/zerowaste/articles/21st\\_cent\\_vision\\_zw.html](http://archive.grrn.org/zerowaste/articles/21st_cent_vision_zw.html) ), with the goal of reducing MSW to zero. If these major entities can do it, Chatham can do it too.

Many of the above components are critical to the success of this plan and are similar to a number of the Unanimous Recommendations in a following section.

## ADVANTAGES of Current System with Improvements

- Potential to save ALL TS users money each year
- Potential to lower current disposal costs by \$108,000/year if town can achieve 90% Recycling Rate goal
- Worst-case scenario an initial sticker price increase of \$24
- Retention of all current services and conveniences now provided by TS
- Increased compliance with Mass DEP Waste Ban Regulations
- No start up costs if existing staff is utilized (possible re-allocation of existing TS staff), but if additional staff is needed it can be paid for with **cost avoidance**
- Any necessary staff increases produce local jobs
- No significant change to the operation of the TS
- Uses current TS infrastructure
- Punitive incentive to increase recycling and reduce waste disposal
- TS users will be able to continue using TS as they now know it without any special requirements except a need to comply with town and state waste ban regulations
- No threat of reduced days or hours to manage or reduce operational costs
- No significant cost increase for families of 3 persons or more
- No need to purchase special bags
- No threat of complications that could arise from having to contract with a 3<sup>rd</sup> party bag vendor and distributor

## DISADVANTAGES of Current System with Improvements

- Punitive approach rather than cost savings for Residents as motivation.
- No observable data to support presumed recycling achievement.
- Number of garbage monitors required to achieve compliance is uncertain.
- One enforcer cannot monitor Residents' bags and Commercial Haulers' loads at the same time.
- No incentive to decrease non-recyclable trash.
- Commercial haulers will face increased management burden ensuring compliance of customers.
- Rental companies and rental real estate owners will have increased management burden ensuring recycling compliance of renters.
- Does not address abuse from multiple households using one sticker.
- Goal of 90% difficult to achieve. (See Nantucket case study, Appendix D)
- Capital costs for installation of an automated system for “self-service”
- May require upfront costs and time to implement the details suggested before projected savings goals can be realized.

# PAY AS YOU THROW

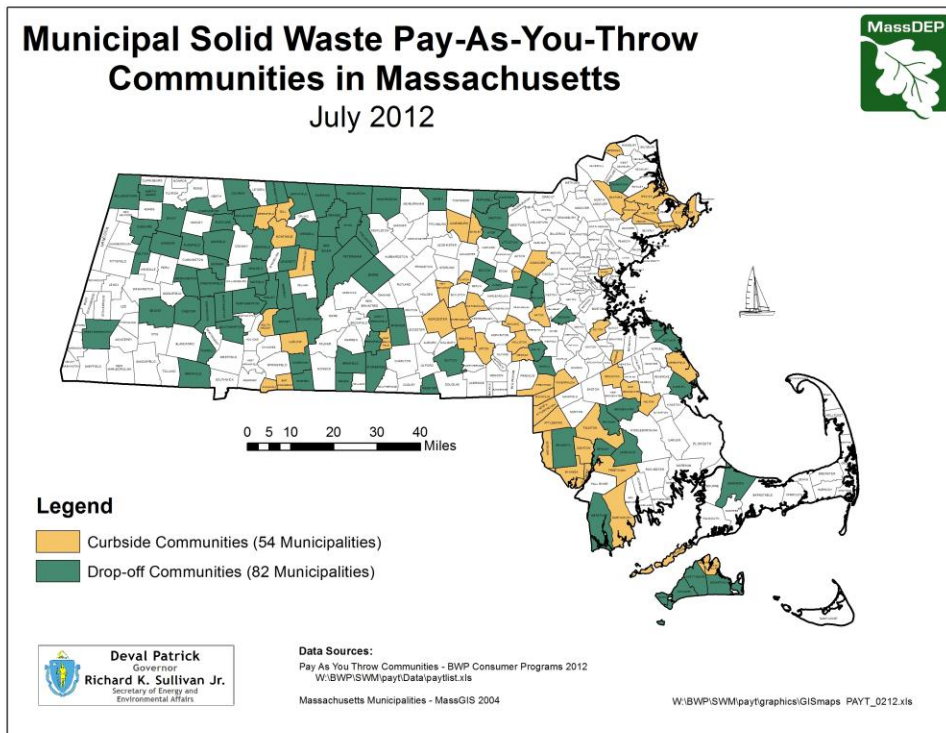
## History

With the exception of a few pioneering cities in the 1970's, user-based or unit-based trash, now commonly known as Pay As You Throw or **PAYT** (some towns prefer SAYT/Save As You Throw or SMART/Save Money And Reduce Trash) began to spread in the early 1990's. By 1997, there were 4,100 PAYT communities in the U.S. There are now more than 7,100. PAYT is a system in which residents pay for each unit of waste discarded rather than paying a fixed fee per residential household. As residents pay directly for waste disposal services, they have a financial incentive to reduce their waste through recycling, composting, and source reduction.

The consistently reported results in increased recycling and decreased trash tonnage - resulting in decreased costs - are aligned with the Solid Waste Task Force's prescribed charge (make recommendations to ***increase recycling and offset future solid waste disposal costs***) as well as Chatham's Comprehensive Plan. (*Provide an efficient and economical system of solid waste disposal. Expand recycling program to reduce the cost of solid waste disposal.*)

No other system has been proven to achieve these goals so effectively.

Of its total 351 towns, Massachusetts currently has 136 PAYT communities, 82 of which have drop-off systems.



## How Does PAYT Work?

Pay-As-You-Throw is a simple concept. While there are several variations, the most common program is:

1. Resident purchases a Transfer Station permit from the Town.
2. Resident also purchases specific Chatham-labeled trash bags at one of several local merchants, Town Hall or the Transfer Station. Typically large and small bags are available.
3. Resident deposits his trash *in these Chatham bags only* at the Transfer Station. The less trash one produces, through recycling, adjusting buying habits, reusing or donating items, composting, etc. the less his trash will cost.

## Sample Improvements from PAYT <sup>7</sup>

Town	PAYT Started	MSW Decrease	Recycling Increase	Pre<Post Recycling	Cost Savings
Cohasset, MA	2001	25%	46%	30%<44%	\$100,000/1styr
Duxbury, MA	2008	50%	33%	33%<48%	\$240,000/yr
Grafton, MA	2009	41%	96%	14%<36%	\$135,000/yr
Concord, NH	2009	50%	75%	15%<33%	\$528,000/yr
Sandwich, MA	2011	42%	45%	18%<37%	\$120,000/yr



## Endorsements:

**U.S. Environmental Protection Agency (EPA):** *"EPA supports this approach to solid waste management because it encompasses three interrelated components that are key to successful community programs:*

- *Environmental Sustainability. Communities report significant increases in recycling and reductions in waste.*
- *Economic Sustainability. Helps communities cope with soaring solid waste expenses and allows residents to take control of their trash bills.*
- *Equity. Fairness - residents pay only for what they throw away."*

**Massachusetts Department of Environmental Protection (MADEP):** *"The Department of Environmental Protection considers Pay As You Throw a primary vehicle for attaining the state's waste diversion goals. PAYT provides residents an opportunity to save money on their trash bills and promotes: Fairness; Increased Recycling, Composting and Waste Reduction; and Improved Environmental Quality."*

**National Resources Defense Council (NRDC):** *"Pay-as-you-throw programs, which charge consumers a per-bag fee for garbage disposal, are indeed valuable tools in the fight to manage waste effectively."*

## Comments from Other Towns and Users:

*\*"If the positive effects on the environment aren't enough of an incentive for a municipality to convert their rubbish & recycling program to the P-A-Y-T method....the monetary savings should certainly seal the deal. The numbers really do speak for themselves. Ashland has saved over \$600,000 in tipping fees since its P-A-Y-T program was implemented in July, 2006." (NOTE: Ashland reduced its trash tonnage by 38% in the first year of PAYT)*

David Miller, DPW Office Manager  
Town of Ashland

*\*"Gloucester's Pay-As-You- Throw trash program is being credited with having kept more than 2,300 tons of rubbish out of the incinerator in 2009, while boosting recycling by 360 tons. The implementation of this program has already exceeded our expectations."*

From "30% savings on city trash in first year."  
GloucesterTimes.com, March 7, 2010

*\*"Nine months after PAYT implementation, Wrentham Selectmen placed a non-binding referendum on the town election ballot: 'Should the town continue the pay-as-you-throw waste reduction program?' By an overwhelming 1,302 to 507 margin, 72 percent of the voters who cast their ballots answered 'yes.' Wrentham's FY05 trash disposal costs dropped \$133,803 and in FY'06 the trash disposal costs dropped about \$130,000 lower than they were prior to implementing the Pay-As-You-Throw program."*

See the complete case study at MassDEP's  
website: <http://www.mass.gov/dep/recycle/reducewrenthampayt.pdf>

(See Appendix E: All Testimonials)

## Examples of Permit and Bag Prices: <sup>8</sup>

PAYT Drop-off towns, populations 2,700-7,000 ppl

Town	Permit Fee	Lg. Bag (30/33 gal)	Small Bag (15gal)
Sandwich, MA	\$55	\$1.20	\$.60
Scituate, MA	\$80	\$2.00	\$1.00
Swansea, MA	\$70	\$1.50	\$.80
Littleton, MA	\$100	\$2.00	\$1.00
Dartmouth, MA	\$80	\$2.00	\$1.00

(See state contract - Appendix F)

## **Chatham – PAYT Cost per Household Estimates**

David Quinn, Barnstable County Regional Waste Reduction Coordinator, created a sample PAYT Model for Chatham.

The model suggests a family of 2

- with a 25% reduction in trash could, with a \$70 sticker and \$1.25 bags, pay \$118/yr;
- with a 35% reduction in trash, pay \$111/yr; and
- with a 50% reduction, pay \$102/yr.

Under the same pricing structure, a larger family of 4:

- with a 25% reduction in trash, could pay \$165/yr;
- with a 35% reduction in trash, pay \$153/yr; and
- with a 50% reduction, pay \$133/yr.

The following cost projections are based on these assumptions:

- ☐ Current Tons per Household 0.62
- ☐ Current Estimated Pounds per Household - 1243.68
- ☐ Average Household size in Chatham (from US Census 2010) - 1.95 people
- ☐ Current Estimated Pounds per Person - 637.79
- ☐ Estimated lbs/person/year with 25% waste reduction - 478.34
- ☐ Estimated lbs/person/year with 35% waste reduction - 414.56
- ☐ Estimated lbs/person/year with 50% waste reduction - 318.89

*"A 2010 EPA/Green Waste Solutions report found that the average drop off town with PAYT has 422lbs/capita/yr". This is an average - some people will produce less, some more.* <sup>9</sup>

Only 33-gal bags were used in these estimates - in reality, small households may prefer smaller sized bags at a lower price which can be offered as an option.

25% Waste Reduction						
Household Size (persons)	Lbs. per Household per year	Lbs. per 33 gal bag	Price per bag	Yearly bag cost	Yearly permit cost	Total yearly cost per Household
1	478.34	25	\$ 1.25	\$ 23.92	\$ 70.00	\$ 93.92
2	956.68	25	\$ 1.25	\$ 47.83	\$ 70.00	\$ 117.83
3	1435.02	25	\$ 1.25	\$ 71.75	\$ 70.00	\$ 141.75
4	1913.36	25	\$ 1.25	\$ 95.67	\$ 70.00	\$ 165.67
5	2391.7	25	\$ 1.25	\$ 119.59	\$ 70.00	\$ 189.59

35% Waste Reduction						
Household Size	Lbs. per Household per year	Lbs. per 33 gal bag	Price per bag	Yearly bag cost	Yearly permit cost	Total yearly cost per HH
1	414.56	25	\$ 1.25	\$ 20.73	\$ 70.00	\$ 90.73
2	829.12	25	\$ 1.25	\$ 41.46	\$ 70.00	\$ 111.46
3	1243.68	25	\$ 1.25	\$ 62.18	\$ 70.00	\$ 132.18
4	1658.24	25	\$ 1.25	\$ 82.91	\$ 70.00	\$ 152.91
5	2072.8	25	\$ 1.25	\$ 103.64	\$ 70.00	\$ 173.64

50% Waste Reduction						
Household Size	Lbs. per Household per year	Lbs. per 33 gal bag	Price per bag	Yearly bag cost	Yearly permit cost	Total yearly cost per HH
1	318.89	25	\$ 1.25	\$ 15.94	\$ 70.00	\$ 85.94
2	637.78	25	\$ 1.25	\$ 31.89	\$ 70.00	\$ 101.89
3	956.67	25	\$ 1.25	\$ 47.83	\$ 70.00	\$ 117.83
4	1275.56	25	\$ 1.25	\$ 63.78	\$ 70.00	\$ 133.78
5	1594.45	25	\$ 1.25	\$ 79.72	\$ 70.00	\$ 149.72

Every town is different. These numbers are meant as suggestions only. If Chatham choses to go with PAYT, a careful study of fixed costs, disposal costs, etc. will be necessary to arrive at realistic prices on permits and bags for the Town. The conventional wisdom among PAYT proponents is to cover fixed costs via the annual permit and disposal costs via bag sales.

**If the Board of Selectmen were to elect to incorporate Pay As You Throw, SWAT recommends:**

- 1) Enlisting the services of WasteZero, Inc. (or similar company) for at least first year of implementation to provide bags and to oversee distribution and record-keeping of bag sales.**
- 2) Seeking MA DEP PAYT grant funds.**

## ADVANTAGES of PAYT:

- Virtually every PAYT community has reported increases in recycling and decreases in trash disposal tonnage and costs after implementing PAYT. These were the primary components of SWAT's mission, as well as section 2.7 of the Town of Chatham's Comprehensive Plan.
- PAYT automatically encourages recycling, now and into the future.
- Chatham Residential TS users dispose an average of 620 pounds per person per year. The average drop-off PAYT town has 422 pounds per person. That would be a 32% reduction from Chatham's current disposal average.<sup>9</sup>
- PAYT is fair and equitable because it is a user-based program; just as with other utilities – gas, oil, electricity, water - usage determines cost to the user.
- With PAYT, permit price typically covers fixed TS operation. Bag prices cover disposal fees. This helps with promoting efficient cost identification, division and control.
- Good for the environment. Less trash and more recycling lead to less pollution, less depletion of natural resources.
- PAYT is a program with built-in self-enforcement measures which reduce need for constant staff oversight.
- PAYT is a first, important step - continued efforts can increase recycling even further.
- Along with PAYT, the unanimous recommendations of SWAT, including increased enforcement, would further improve efficiencies of the TS operation.
- PAYT encourages awareness of what one throws out as opposed to buying a sticker that allows unlimited disposal
- For low-income households, just as other utilities provide special rates, a PAYT programs can include lowered rates or a quantity of free bags for low-income households
- The experience of other communities is that the common fear that the implementation of PAYT will result in an increase in illegal dumping has rarely or never been realized, but should be monitored. (Appendices G: Wellfleet Email and SERA Memo)
- PAYT would be sold at frequently visited locations such as markets, pharmacies, Transfer Station, etc. Merchants are usually agreeable as this brings increased traffic.

## DISADVANTAGES of PAYT:

- PAYT would be a new system for Chatham and would require education and careful monitoring during transition.
- As with any new program, additional staff may be needed for start-up.
- Perception that the bag fee is a tax.
- Bag Purchase; residents would be required to purchase specific Chatham bags.
- Some residents may go to commercial haulers instead of TS.
- Recycling Rate Plateau – In general, the recycling rate with a PAYT program does not exceed 55%, however some communities have achieved a higher recycling rate.
- Some residents may encounter inconvenience.
- No variable volume disposal ; disposal price of large lightweight yet compactible garbage is unnecessarily inflated.
- Possible reduction in TS hours of operation or days.
- All trash items must be bagged.
- Incompatible fee structure – using a bag-based system charges residents by volume whereas the costs are related to weight.
- Possibility of logistical management issues; often the administration of the program is outsourced to a private company.
- Affected users – large families with children will see their trash disposal fees increase.
- Rental real estate owners will face increased management burden.
- Commercial haulers and Residential users will face increased management burdens.
- Concerns that increased illegal dumping will occur as a result of the program.
- On its own, PAYT does not fully address current abuse of multiple households illegally using one sticker.

# Unanimous SWAT Recommendations

*In order of priority*

*Responsible entity and possible cost (\$) where noted*

The issue of dealing with and managing municipal solid waste disposal and the recycling component is a complicated one. There is not a one size fits all solution and discussions on the topic invoke a variety of opinions on the matter. This was true within the taskforce membership, however the following recommendations were agreed upon unanimously.

## **1. Computerize TS for record keeping and efficiency**

- Provide computer network and internet service at the Transfer Station (Currently the TS Foreman picks up any email at the DPW building on Crowell Rd.)
- Provide computerized system for data and fee collections.

*(TS/DPW, \$)*

## **2. Increased enforcement of Waste Ban Regulations for residential and commercial TS users.**

Common abuses of the current system (but not limited to) include:

- Hiding waste ban items in bags (eg) cardboard, glass, construction debris, TVs, etc.
- Multiple households using one sticker
- Commercial trash being dumped under residential sticker

To accomplish requires Town officials to support staff in disciplinary actions and may require additional staff. The cost will require further study.

*(TS, \$)*

## **3. Increased enforcement of waste ban regulations for commercial haulers**

- There must be increased recycling by commercial haulers. Further investigation of how this can be accomplished requires additional discussion with stakeholders.

*(TS, BOH, \$)*

#### **4. Increased public education/outreach**

Efforts to inform the public about solid waste disposal and ways to reduce, recycle, and divert waste should be supported. This can be accomplished through actions such as

- Recycling awareness events
- Website
- Workshops (such as the composting workshop held in Oct 2012)
- Signage
- Mailings / other use of media including Channel 18
- Hotline
- Volunteers posted at recycling area

*(TS; Volunteers, \$)*

#### **5. Work with Chamber of Commerce, rental agencies and rental owners to promote recycling for their renters.**

- Develop a program to promote recycling for rental properties

*(Chamber of Commerce, Volunteers, staff, \$)*

#### **6. Explore options for food waste diversion at TS**

- Offer free composting workshops
- Continue food waste composting pilot program
- Continue Compost Bin Program

*(TS, Volunteers, \$)*

#### **7. Develop a more comprehensive, cost effective, solid waste disposal and recycling program for town offices and schools**

*(\$)*

#### **8. Improve Gift Shop operation**

- Increase hours & days
- Relocate to street side location for ease of access
- Upgrade to be weather tight, improve storage, make year 'round

*(TS, \$)*

## **9. Continue current recycling separation at Transfer Station**

- Continuing current practice allows the town to take advantage of possible revenue (generally co-mingling, as in single-stream or dual-stream recycling, reduces value of a recyclable)
- Continue to monitor markets for recyclable materials to determine level of increased recycling vs. cost effectiveness.

*(TS Staff)*

## **10. Continue to pursue DEP grants and funding opportunities**

*(Staff)*

## **11. Provide public space recycling barrels with trash bins around town**

*(DPW, Park & Rec, TS, \$)*

## **12. Provide compactors for recycling at TS**

We understand that further infra-structure improvements may be necessary to install compactors (utilities, etc.)

*(DPW/TS, \$)*

## **13. Improve traffic flow and TS layout and infrastructure**

Although the transfer station is run quite efficiently, improvements to traffic flow and increase in ease for users may be realized with a redesign of the layout.

*(DPW/TS, \$)*

## **14. Consider creation of Enterprise Fund in the future to support TS operations**

Many towns have gone to enterprise funds in order to run their transfer station operations. With an enterprise fund, all moneys brought in by the TS would remain within the TS budget and not go into the General Fund. This is seen by some as a way to manage the operation as a business.

*(BOS/Town Manager)*

## **15. Investigate taking Chatham MSW to Yarmouth to reduce transportation costs.**

*(DPW)*



## **16. Continue disposal at waste-to-energy facility**

Waste conversion to energy seems to the taskforce to be a better option, assuming similar cost, than landfilling, though we understand incineration too has its environmental issues

## **17. Recommend on-going Solid Waste or Recycling Advisory Committee**

Many issues will require further study in order to respond to the upcoming changes in solid waste and recycling issues.

*(BOS)*

*\*Although we have tried to prioritize our recommendations, some items come under current proposed capital improvement plans and we acknowledge that they may materialize in future budget cycles as planned.*

## **Public Forums**

SWAT recommends that the Board of Selectmen schedule *at least 2* Public Forums, one before and one after their decision, or 2 after their decision.

We also recommend a presentation by the Town of Sandwich DPW Director Paul Tilton as a case example for PAYT should you decide to further investigate this option.

## Glossary

**Bulky waste items:** Large items of refuse including, but not limited to, appliances, furniture, large auto parts, non-hazardous construction and demolition materials, and trees that cannot be handled by normal solid waste processing, collection, and disposal methods.

**Bundled Rate:** Commercial Haulers provide recycling and waste disposal services at a single rate inclusive of both services.

**Commercial Hauler:** The privately-owned commercial MSW collection firms that operate in Chatham

**CPI:** A consumer price index measures changes in the price level of [consumer goods](#) and [services](#) purchased by households. The CPI in the United States is defined by the [Bureau of Labor Statistics](#) as "a measure of the average change over time in the prices paid by urban consumers for a [market basket](#) of consumer goods and services.

**Commercial Waste:** refers to waste generated by businesses, such as office buildings; retail and wholesale establishments; and restaurants. Examples include corrugated containers, food scraps, office papers, disposable tableware, paper napkins, and yard trimmings.

**Composting:** Collecting organic waste, such as food scraps and yard trimmings, and storing it under conditions designed to help it break down naturally. This resulting compost can then be used as a natural fertilizer. Currently Chatham composts yard waste only on a large scale (pilot food waste program ongoing with Watts Farm).

**Construction and demolition (C&D) debris:** Includes concrete, asphalt, tree stumps and other wood wastes, metal, and bricks. (C&D debris is excluded from the definition of municipal solid waste used by EPA and the National Recycling Coalition.)

**Cost avoidance:** A reduction in future MSW disposal costs realized by diversion of solid waste tonnage from the garbage stream.

**Dual Stream Recycling:** Source separated recyclables collected in a mixed container stream (typically glass, ferrous metal, aluminum and other non-ferrous metals, plastics) and a mixed paper stream (including, paper, newspaper, phone books, junk mail, etc.).

**Enterprise fund:** An independent budget dedicated for a special purpose or activity, such as a local municipal solid waste program.

**Hazardous waste:** Waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes.

**Landfilling:** The disposal of solid waste, at an engineered facility, in a series of compacted layers on land, which are covered with soil daily. Fill areas are carefully prepared to prevent nuisances or public health hazards, and clay and/or synthetic liners are used to prevent releases to groundwater.

**MTC:** The Massachusetts Technology Collaborative (MTC) manages a program called the Renewable Energy Trust Fund, which was created through state legislation in 1998 to assist cities and towns that were contracted with a waste-to-energy facility (such as SEMASS). The fund provided grants to offset a portion of the capital costs associated with required clean-air emissions upgrades to these facilities. The trust collected a surcharge on electric utility bills, pooled the funds, and then dispersed the grants to Cape Cod towns between 2001 and 2003, which the towns then forwarded to SEMASS to reduce a percentage of the towns' share of the surcharge for the capital upgrades. The disbursement of these funds resulted in a reduced surcharge that each town pays under its current contract with SEMASS. In 2009, responsibility for managing the Renewable Energy Trust was transferred from the MTC to the Massachusetts Clean Energy Center (MassCEC).

**MSW:** Municipal Solid Waste more commonly known as trash or garbage. It consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from our homes, schools, hospitals, and businesses.

**PAYT:** A system for waste collection in which households are charged according to the amount of refuse they dispose of at the transfer station. Also known as SAYT/Save As You Throw, Unit-Based Trash disposal and SMART/Save Money And Reduce Trash.

**Recyclables:** Products or materials that can be collected, separated, and processed to be used as raw materials in the manufacture of new products.

**Price Escalator:** Price escalation clause is a clause in a contract allowing the seller to raise prices if the cost of inputs increases.

**Recycling Rate:** Refers to the percentage of the total municipal solid waste which is recycled, by weight (amount recycled divided by total of amount recycled plus amount discarded as trash). Does not include any C&D material, or many other special types of material.

**RFQ:** A **request for quotation** is a standard business process whose purpose is to invite suppliers into a bidding process to bid on specific products or services.

**SEMASS:** Covanta SEMASS, L.P. West Wareham, MA. The Southeastern Massachusetts (SEMASS) Resource Recovery Facility, operating as Covanta SEMASS, L.P., provides the community with an alternative to municipal solid waste (MSW) disposal at landfills through waste to energy incineration.

**Single Stream Recycling:** All recyclable material is mixed in a single container

**Tipping Fee:** The fees, usually dollars per ton, charged to haulers or municipalities for delivering materials to recovery or disposal facilities.

**Waste Ban:** The Massachusetts Department of Environmental Protection (MassDEP) bans on landfilling and combustion of easy-to-recycle and toxic materials. The following materials and items are prohibited from disposal and/or transfer for disposal in Massachusetts:

- Asphalt pavement, brick & concrete
- Cathode ray tubes
- Clean gypsum wallboard (effective July 1, 2011)
- Ferrous & non-ferrous metals
- Glass & metal containers
- Lead acid batteries
- Leaves & yard waste
- Recyclable paper, cardboard & paperboard
- Single resin narrow-necked plastics
- Treated & untreated wood & wood waste (banned from landfills only)
- White goods (large appliances)
- Whole tires (banned from landfills only; shredded tires acceptable)

**Waste to Energy:** (WTE) The process of creating energy in the form of electricity or heat from the incineration of waste. WTE is a form of energy recovery. Most WTE processes produce electricity directly through combustion

# References:

## FOOTNOTES

1. David Quinn, Barnstable County Regional Waste Reduction Coordinator.
2. MSW Consultants, *Covanta SEMASS Waste Characterization Study in Support of Class II Recycling Programs*. 2010
3. Chatham DPW, Transfer Station; compiled by David Quinn, Barnstable County Regional Waste Reduction Coordinator
4. Cape Cod Commission, Greg Smith, Cape Cod Solid Waste Program
5. David Quinn, Barnstable County Regional Waste Reduction Coordinator.
6. David Quinn, Barnstable County Regional Waste Reduction Coordinator
7. Multiple-sources:  
Cohasset: MassDEP; Duxbury: [www.sustainableduxbury.com](http://www.sustainableduxbury.com); Grafton: [www.wastezero.com](http://www.wastezero.com); Concord, NH: [www.epa.gov](http://www.epa.gov) ;  
Sandwich: capenews.net/communities/sandwich/news/2128  
Cohasset: The Commonwealth of Massachusetts Department of Environmental Protection: *Pay-As-You-Throw: An Implementation Guide for Solid Waste Unit-Based Pricing Programs*, January 2004; Concord: [www.epa.gov/wastes/conserves/tools/payt/tools/bulletin/summer10.pdf](http://www.epa.gov/wastes/conserves/tools/payt/tools/bulletin/summer10.pdf)
8. MADEP [www.mass.gov/dep/recycle/reduce/paytfact.htm](http://www.mass.gov/dep/recycle/reduce/paytfact.htm)
9. David Quinn Barnstable County Regional Waste Reduction Coordinator and US EPA  
<http://www.epa.gov/osw/conserves/tools/payt/tools/bulletin/summer10.pdf>

# APPENDIX A



1900 Crown Colony Drive  
Suite 402  
Quincy, MA 02169  
TL 617-657-0200  
FX 617-657-0201  
www.envpartners.com

January 3, 2013

Mr. Mark Dakers  
Division of Solid Waste  
Department of Environmental Protection  
Southeast Region  
20 Riverside Drive  
Lakeville, MA 02347

RE: Chatham Transfer Station  
Inspection Report – December 2012

Dear Mr. Dakers:

Attached please find the inspection report for the Chatham Transfer Station that was performed on Wednesday, December 19, 2012. As in previous inspection reports, there were no issues of concern observed at the transfer station and the station continues to be an extremely well run operation.

Congratulations should be conveyed to the transfer station foreman and staff for being as conscientious as they are with their operations and for providing a facility that is clean, well maintained and free of nuisance conditions.

Some highlights from this inspection:

- The rehabilitation of the catch basins located adjacent to the large overhead doors on the north side of the transfer station was completed this fall. The catch basins were equipped with siltation controls (socks), and are proving to be very effective in keeping the paved surface of this area clear of standing water after storm events. The transfer station staff is making an effort to perform regular sweepings of this area to reduce the amount of silt reaching the catch basins.
- At the recycling area, the Town has made two modifications targeted toward increasing their recyclables recovery: 1) a bin has been added for rigid recyclables such as lawn chairs and coolers; and 2) the Town is piloting the collection of residentially-generated organic (food) waste. The food waste is picked up and composted by Watts Family Farm in Forestdale, MA.
- At least one of the large overhead doors at the transfer station is scheduled to be replaced during FY 2013.

- The leaf and yard waste composting operation has received an unusually large volume of this material during this year. Whereas the volume that the station typically generates two active windrows of compost, this year five windrows were created. Should this trend continue in future years the facility may need to expand the area for their composting operations.
- The Town is continuing to consider a “pay-as-you-throw” approach to collection, and the committee formed to evaluate this alternative is scheduled to meet with the Board of Selectmen on January 29<sup>th</sup> to present their findings and recommendation.

Our next transfer station inspection is scheduled to be performed during late February/early March 2013. Should you have any questions concerning this inspection report, please contact either Jeff Bremner, the transfer station foreman, at (508) 945-5155 or me at (617) 657-0251.

Sincerely,

ENVIRONMENTAL PARTNERS GROUP



Mark White  
Project Manager

Attachments: TS Inspection Report – December 2012

cc: Maria June, Solid Waste Division, DEP Southeast Region  
Jeff Colby, Chatham Department of Public Works  
Jeff Bremner, Chatham Transfer Station  
Bob Duncanson, Chatham Director of Health and Environment

# APPENDIX B

## CAPE COD SOLID WASTE ADVISORY COMMITTEE SUMMARY OF RESPONSES TO RFQ - Chatham

<u>VENDOR</u>	<u>TERM</u>	<u>PUT OR PAY</u>	<u>ESCALAT ION FACTOR</u>	<u>FUEL ADJUSTM ENT</u>	<u>DISPOS AL ONLY</u>	<u>TRANSPORT ATION AND DISPOSAL</u>
Waste Management	5 years w/ two 5 year options <sup>1</sup>	No, but Towns must commit to delivering all waste owned or controlled	CPI Not less than 2% or more than 6% each year	Yes	-	\$83.61
E.L. Harvey	5 years (open to discussing a longer term)	No	CPI	Yes	\$52.37 <sup>2</sup>	\$87.37 <sup>3</sup>
Bourne	5 years (24,000 tpy) <sup>4</sup>	-	-	-	-	-

<sup>1</sup> Must be at Town's Option

<sup>2</sup> Cape towns responsible for delivery to Southbridge landfill.

<sup>3</sup> Pricing only for Cape Towns. Disposal at Southbridge landfill.

<sup>4</sup> Bourne did not provide any pricing information.



**CAPE COD SOLID WASTE ADVISORY COMMITTEE**  
**SUMMARY OF RESPONSES TO RFQ - Chatham**

<b><u>VENDOR</u></b>	<b><u>TERM</u></b>	<b><u>PUT OR PAY</u></b>	<b><u>ESCALAT ION FACTOR</u></b>	<b><u>FUEL ADJUSTM ENT</u></b>	<b><u>DISPOS AL ONLY</u></b>	<b><u>TRANSPORTA TION AND DISPOSAL</u></b>
<b>We Care Organics</b>	<b>Prices are for all term durati ons</b>	<b>No</b>	<b>CPI</b>	<b>Yes</b>	<b>-</b>	<b>\$88.66<sup>5</sup></b>
<b>Interstate Waste Technolo gies<sup>6</sup></b>	<b>Up to 20 years</b>	<b>No, but must contractu ally commit to deliver all waste owned or controlle d</b>	<b>CPI</b>	<b>Yes</b>	<b>\$56.00</b>	<b>\$88.00<sup>7</sup></b>
<b>Sustainab le New Energy<sup>8</sup></b>	<b>5 years with 5 year renew als</b>	<b>Minimu m weekly delivery of 120 tons/day</b>	<b>Fixed for first 5 years CPI after 5 years</b>	<b>No  (No Transporta tion)</b>	<b>\$50.00</b>	<b>—</b>

<sup>5</sup> Transfer site either Yarmouth transfer station or rail facility in Taunton; Disposal at either gasification plant, MRF, and organics facility in Taunton or Seneca Meadows landfill in upstate New York. Facility will be operational by 1/1/15.

<sup>6</sup> Facility not operational until third quarter of 2016. We Care Organics will be a subcontractor and will dispose of waste until the Taunton facility is operational.

<sup>7</sup> Transportation Only - \$32.00

<sup>8</sup> Facility not yet permitted. Location either at MMR or off Exit 2 in Plymouth.

# APPENDIX C SURVEY

**Town of Chatham**  
**2012 Trash Management Survey**  
**Link to online version at [www.chatham-ma.gov](http://www.chatham-ma.gov)**

Chatham's trash disposal contract will soon expire, resulting in a significantly higher cost to dispose of our trash. Please take a few minutes to fill out this brief survey. Your confidential feedback is critical to help guide future trash management policy that **will have a direct financial impact on all residents**.

1. Please check any that apply:
 

<input type="checkbox"/> Own Chatham home	<input type="checkbox"/> Seasonal Resident	<input type="checkbox"/> Chatham Business Owner
<input type="checkbox"/> Rent Chatham home	<input type="checkbox"/> Year-Round Resident	<input type="checkbox"/> Live with family/friend/other
2. How many people are there in your Chatham household?
 

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6+
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------
3. Which of the following best describes the trash disposal methods of your Chatham household?
 

<input type="checkbox"/> Buy Transfer Station Sticker	<input type="checkbox"/> Buy Recycling Sticker only
<input type="checkbox"/> Use Commercial Hauling Service	<input type="checkbox"/> Dispose of trash elsewhere: _____
<input type="checkbox"/> Pay fee per bag at Transfer Station	<input type="checkbox"/> Other, please explain _____
4. Please estimate the percentage (0-100%) of your trash that you currently recycle: \_\_\_\_\_ %
5. Please estimate the percentage (0-100%) of your trash that you could recycle: \_\_\_\_\_ %
6. What are the primary reasons that you do not recycle more? Check any that apply.
 

<input type="checkbox"/> No Curbside Pickup	<input type="checkbox"/> No incentive/Saves no money
<input type="checkbox"/> Difficult/Inconvenient <u>at home</u>	<input type="checkbox"/> Won't make a difference
<input type="checkbox"/> Difficult/Inconvenient <u>at Transfer Station</u>	<input type="checkbox"/> Not enough material to bother
<input type="checkbox"/> Unpleasant	<input type="checkbox"/> Hauler doesn't offer service
<input type="checkbox"/> I don't care	<input type="checkbox"/> Other, please explain _____
7. How much of the following items do you divert from your trash?

Item	None	Some	Half	Most	All	I'm not aware that this is recycled in Chatham
Redeemable cans, bottles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paper, Newspaper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plastic Containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrugated Cardboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tin/Aluminum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yard Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronics (Computers...)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Textiles, Clothes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Batteries, Florescent Bulbs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unwanted useable items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What do you do with the Yard Waste (grass clippings, leaves, etc...) from your Chatham home?
- ☐ Don't generate any    ☐ Compost at home    ☐ Other, please explain: \_\_\_\_\_
- ☐ Pile in my yard    ☐ Compost at Transfer Station
- ☐ Throw away in trash    ☐ Landscaper removes
9. Do you compost kitchen scraps at home?    ☐ Yes    ☐ No    ☐ Sometimes
10. What do you do when you don't know whether something is recyclable?
- ☐ Throw it in the trash    ☐ Ask attendant at Transfer Station
- ☐ Place with recyclables    ☐ Other, please explain \_\_\_\_\_
11. Which of the following would help you recycle more and/or decrease the volume of your trash?
- ☐ Having more recycling information    ☐ Increased attendant oversight
- ☐ Increase cost to dispose of trash    ☐ Improved signage at Transfer Station
- ☐ An instructional smart phone app    ☐ Improved traffic flow at Transfer Station
- ☐ An instructional video    ☐ Offer a composting workshop
- ☐ An informational website    ☐ Improve the signage at the Transfer Station
- ☐ An informational brochure    ☐ Improve the Gift Shop by \_\_\_\_\_
- ☐ Let me drop all recyclables off without sorting    ☐ Other, please explain \_\_\_\_\_
12. In order to address Chatham's upcoming increase in waste disposal costs, which options could you accept? Please select at least one choice.
- ☐ Keep current system and increase real estate tax
- ☐ Keep current system and increase sticker price
- ☐ Keep current system and increase current waste ban compliance
- ☐ Close the Transfer Station, residents choose independent hauler
- ☐ Change current system to Pay per Bag program
- ☐ Other, please explain: \_\_\_\_\_
13. Do you have any other comments, suggestions, or thoughts on trash management in Chatham?

Completed surveys may be dropped off at any Drop Box, the Transfer Station, Annex, Town Hall, enclosed with the payment of any Chatham bill, or mailed to Town of Chatham at 549 Main Street, 02633. Thank you very much for your time.

- Chatham Solid Waste Advisory Team  
June, 2012

## Answers to open-ended survey questions:

### **#3. Your trash disposal methods? Other:**

Burn whatever we can, cardboard mostly  
Seasonal commercial hauler  
Condo dumpster  
5-6 bags per year (per bag & recycling sticker)  
Compost  
Take own trash to transfer station  
I take it all to the Transfer Station and recycling is no problem.  
with beach permit comb  
60 percent  
Nickerson  
Not enough trash to warrant sticker cost  
We find the Chatham dump very inconvenient, particularly regarding recycling.  
We are big recyclers so my husband actually brings all our trash and recyclables back to Newton every week. I understand that Nickerson has a single stream recycling service that we will likely contract.  
Go to the dump on Saturdays. Doesn't everyone?  
Trash pickup service  
Garbage in the disposal and recycle as much as possible  
Benjamin T. Nickerson  
Nickerson pick up  
Provided by condo association  
Recycle everything possible + commercial  
I have two cars and paid \$175.00  
Business location trash removal as well as some recyclables  
Easiest for me at the present time.  
I rented & did not want to buy a sticker.  
Fish pier dumpster!  
Rental units  
Gustare retail shop in Chatham uses both commercial pick up and recycling services.  
Office trash going into a dumpster of a private company; pay per bag for household trash and recycle the rest  
We use benjamin nickerson rubbish removal  
I use the commercial vender only in the summer.  
Throw everything recyclable at transfer station and recyclables in appropriate bins at recycling area. also anything that might be of use to someone else at the little bldg used for that purpose when open. also appliances etc. to the appropriate area after paying the fee.  
I dispose of trash at the transfer station - I dispose of leaves, grass etc. at the transfer station - I recycle plastic, glass, newspaper, corrugated cardboard etc. at the transfer station  
We tried the Transfer Station Sticker for 2 seasons but the fact that there were extra charges beyond the sticker price for yard waste, etc seemed out of line. Now we pay one fee for everything.

### **#6. Why not recycle more? Other:**

I recycle as much as I possibly can; not able to recycle plastic bags, styrofoam, etc.  
Just forget  
It costs nothing in CT; we take it home, too expensive in Chatham  
Already do all possible  
Already do best we can

You do not accept all items at center, plastics, etc.  
Everything possible IS recycled  
So busy!  
I'm told the plastic doesn't get recycled  
Person who takes trash to landfill will not recycle  
Takes a long time to separate  
Sometimes just not sure if  
Neighbors uncooperative  
I do a lot  
Looking for a small composter for household garbage  
We recycle everything we can  
Hauler take all cardboard & plastic, no paper  
Not sure what can be recycled  
Not aware  
Try to recycle as much as possible but some things slip by in error.  
No place for bottle caps  
My only non recycle items are incontinence pads  
Styrofoam plastic packaging meat by products are not accepted  
Some stuff not recyclable, eg.bones, used cat litter  
Recycle all we can  
Some things are just too disgusting to recycle or not accepted. Already recycle to a great extent, close to maximum  
No styrofoam are accepted or wood scraps?  
Feel we recycle just about all we can  
Nothing else to recycle  
Recycle all we can  
We do all we can. Not sure about batteries, don't recycle personal papers, no shredding.  
We do ia all the is not acceptable  
No more to recycle  
Laziness, we are old  
Don't accept styrofoam containers  
We recycle everything we can  
Need a better sorting plan at home  
I could recycle more paper in rooms other than kitchen where the recycle bin is located.  
I recycle all bottles, cans, plastics, newspapers and magazines.  
Recycle the max. The rest is garbage  
It's the random nasty bit of garbage that could be recycled but would take more resources washing to meet the cleanliness standard at the transfer station.  
Don't like to clean some containers  
Can't remove gunk from jars/cans  
I have no problem recycling  
Need a push  
Don't offer as many recycling offers for all plastics and boxes (cereal boxes, pasta boxes, etc.) Also storage at home for organizing different types is difficult  
I'm limited by what i  
I use what is available at transfer station.  
just don't  
Hauler doesn't recycle plastics  
Re-using recyclable containers for contaminants making them unrecyclable  
Sometimes a guest or someone will put a recyclable item in the regular trash  
Hauler doesn't seem to handle anything except glass and newspaper  
Not recyclable

Recycle all I can now, as far as I know.  
Not accepted  
ALREADY RECYCLE  
There is no way to recycle kitchen trash, wrappings, tape, etc.ings,  
I need to start composting food waste  
Not everything is accepted.  
Could recycle cereal boxes but don't for no particular reason  
Forget  
We recycle all that we can  
Some things I don't want to waste the water & soap to clean - plastic margarine containers  
All family members not diligent enough,don't care  
We recycle all that we can except we don't compost food scraps.  
Fyi: this is bob staake - that's why the recycle rate is so high  
Guest House Guests do not always recycle and we do not want to pick through their trash  
Sometimes a recyclable gets tossed by mistake  
The items need to be taken to a different facility and I run out of time  
If containers were provided by town, (as they have been anywhere else we've resided, Toronto, Edgartown, VA, etc. it would make it easier to sort and recycle! Especially if hauler would offer service  
Meat package,non paper &non plastic food wrappers.  
I recycle as much as I can  
I recycle as much as I can  
There is no more that I can recycle  
Not sure what else is recyclable.  
We wish it was easier to recycle. Feel guilty  
We recycle everything that is recyclable.  
No current, easy option and we rent out our home in summer  
Loose paper goods  
We recycle virtually everything recyclable  
I recycle everything about once per week  
We recycle as much as we can. Pretty much everything.  
I believe that we recycle all of our trash (garbage?) that we dispose of through a commercial service.  
Would recycle as much as possible if the set up allows  
Appliance recycle only open weekends  
Recycling for reusable item=More Hrs Open  
More Hds recycling center  
I DO recycle, & avoid non-recyclable purchases.  
I care but have a hard time not just throwing it away  
I'm too busy working to recycle because i have to pay for my mortgage  
Unsure if some items are recyclable  
WE already recycle everything acceptable at transfer station  
Only helps with plastic and cardboard  
Need more input from family  
Oddball stuff that's not recyclable  
I currently recycle  
Separation, should be single stream  
Hauler doesn't take recyclables from the office; besides food garbage, we throw out plastic bags, styrofoam, waxed cartons, cat litter, alkaline batteries, and non-recyclable oddball items  
Our service does not recycle our paper or cardboard. Typically, we make an additional run to the dump to recycle these items.  
I miss certain items and others who visit don't help.  
We recycle everything we feel is recyclable  
50 different containers  
Some items i don't know if they are recyclable

Unless you want paper and rags etc. that are dirty recycled I recycle everything including the fact that I have compost bins at home for vegetable matter and yard waste  
The other materials are not recyclable --paper, etc  
I recycle everything possible.  
Larger plastics not with other recyclables  
Some things, like styrofoam, you do not have a place to recycle. Also other plastics , packaging and bottle caps.  
Styrofoam is not recycled here  
I actually take things back home with me to recycle at my free curbside pick up.  
I recycle everything the transfer station takes.  
Not sure if recycled at transfer station i.e. plastics that are not food/drink containers.  
I think I'm doing a great job  
The only thing we don't recycle that I think we should/could is compostable wet trash.  
We'd like to be able to do it at the dump but don't know if we can. Tried doing it in the backyard but the raccoons got into it. Now I fear that the coyotes would find it. Any way to take compostables to the dump/transfer station? Without wet garbage in our trash bags, we could recycle almost everything, which is our goal.  
I forget to separate the paper from the trash.

**#8. What do you do with yard waste? Other:**

Brush @ transfer  
No yard waste  
Do not do yard work  
Bring sticks off cape to relative that composts  
Put in woods  
I mulch pine needles and leaves with my lawn mower and use it as mulch to keep down weeds in some areas.  
Own landscaping company, dispose of at Cape Sand & Recycle if needed  
I remove the rest.  
For Garden  
Contractor removes brush, branches, etc.  
We do not have a lawn, only native plants .Wooded area.  
All our yard waste goes in one spot to let it compost naturally  
Burn permit in winter  
c. 40% of the yard is uncleared; in brush and easily receives garden & brush cuttings  
Branches I chip for mulch  
I own a chipper for most trimmings  
Stump dump  
Wooded area  
I pile it up in the yard and walk away.  
Dump that on the other side of my fence  
TW Nickerson  
For brush use TW Nickerson  
Have a series of 8X8 bins, move each along every year, then sift and put on gardens  
I have a large garden and 4 compost bins to move the compost as it rots down  
Burn  
I bring everything they will take

**#10. When you don't know if recyclable? Other:**

Check online  
We know what can be recycled  
Research online  
Take it home (outside of Chatham) to recycle  
Use my best judgment  
As I said, Newton has a great single stream curbside recycling service. We spend

summers here and my husband drives the trash/recyclables for pick up there.  
Independently determine if it can be recycled here  
Research online, find ways to recycle  
Ask my wife  
Items are usually labeled, check with transfer station  
Non plastic. metal, paper, or glass  
Not much falls into this category  
Find out.  
Sometimes I put it in the recycle bin, but more often I just throw. it away.  
Dump it offshore  
Ask Husband  
Compost kitchen scraps are not allowed in with lawn & leaves waste at CTS. I feel this should be changed.  
The attendant is very helpful with that question

## **#11. What would help you recycle more?**

### **a. Improve Gift Shop by:**

Add more hours.  
Expand hours, make bigger, take more items like Harwich.  
Open every day, same hours as Transfer Station.  
Tell people who work there not to take all the good stuff immediately.  
Make it a swap and much larger.  
Accept electronics.  
Limiting time - some people are there for hours.  
Longer hours.  
Larger, open more hours.  
Allow picking for resale.  
More hours, year round.  
Too seasonal, open too few days.  
Longer and year-round hours.  
Open more months of the year.  
Expand hours.  
Swap for large items - good tv's etc..also, know that gift shop is a swap shop, not a donation service for workers.  
Accept furniture.  
More hours, year-round.  
Increase operating hours; especially off-season.  
Open more days, hours.  
More hours.  
The off season closure makes it hard to "gift" items - sometimes you just want it out of your house.  
I wish the gift shop could be open during regular dump hours.  
Expand footprint so more/better things can be dropped off at site. Have attendants leave objects for public to pick rather than take stuff and put it in their own cars. Sometime would rather go to Harwich and go to their gift shop and drop off and pick up.  
Stop workers from taking the best and call friends to take the stuff that they put aside.

### **b. Other/Explain:**

Nothing-ok now.  
Already do all possible - happy with present system, very efficient and laid out well.  
More items for recycling.  
Curbside pickup.  
More recycling articles in Chronicle.  
Assistance needed!  
Current system satisfactory.  
Put up a huge sign of do's and don'ts.



Pay per bag - but sounds hard and would result in delays and long lines??  
 I got in an accident this year at dump in recycling area. Traffic flow, recycling area conflict with through traffic. People goin got gift shop or exiting dump drive too fast past people backing up. Cut off loop. Two separate traffic flows.  
 Pay per bag last resort.  
 Not possible with present packaging.  
 Lower cost of brush drop off. Very, very expensive.  
 Lest waste from vendors.  
 It's fine as it is now.  
 20 years off our birthdays!  
 All styrofoam should be recyclable.  
 One-stop recycling would be nice in winter.  
 The no-sorting option is unrealistic unless we send our refuse to a prison for them to sort.  
 No idea what you can do to increase.  
 Happy to sort if hauler removes.  
 Increased attendant oversight would aid others and is a must.  
 More signage with the various types, offer to recycle more and if you do ,let us know!  
 Not having to sort out different colors of glass.  
 Have hauler offer more options (e.g. cardboard).  
 Positive incentive, like have Town set a target for total recyclables and show progress with a "barometer" type display.  
 New changes have made it easier to recycle.  
 Ok as is.  
 Compost kitchen scraps at T.S.  
 I've seen many people throw recyclables in with their regular trash.  
 Jack is not user-friendly.  
 Textile bins, what to do with old paint between special pick-ups in Harwich.  
 Make it easier, not more expensive and harder!! The recycling at the Transfer Station is very difficult and time consuming, most people probably won't do it. I think Chatham should also start an awareness campaign.  
 Recycling is hard work, all people don't like recycling.  
 It would help if the bitter booth attendant were friendlier. His attitude would likely turn off any potential recyclers.  
 Provision by trash hauler.  
 It is good now.  
 I already recycle just about everything.  
 The town should pick up recyclables at the curb once a week.  
 Most trash is wrappings and contaminated wrapping paper.  
 Recycle all that is recyclable.  
 Home pick up service, even if different from current trash removal vendor.  
 Large paper shredder.  
 Incentive.  
 Single stream.  
 Trash pickup company needs to provide.  
 No change.  
 Know what to do with it without cost.  
 We pretty much recycle all we can. What we don't is not much and not worth the trouble.  
 Allow a town, ie from PA or ME, to leave a trailer at the GiftShop, & let them haul it away when full.  
 I am LAZY.  
 Show me the money.  
 Make it simple.  
 More specifics, for example, we only recently found out that brown paper bags go into the corrugated cardboard containers.  
 If commercial trash hauler would set up.

Trash haulers take recyclables in separate container, bottles, cans and paper.  
 Many elders are not willing to deal with recycling at all. No amount of \$ will help with their education. Trash contractors must do the recycling portion from their clients and charge for it.  
 Having someone to ask about the oddball items, attendant is often too busy.  
 The answer to the question is best asked of the wealthy and others that have their trash picked up by a commercial hauler.  
 Make it easy, convenient & inexpensive.  
 Curbside pickup.  
 Detailed info about what really happens when recyclables leave Transfer Station. There is a sentiment that things are not really being recycled properly.  
 Have access to recycle more items.  
 Ok as is.  
 With unemployment so high, wouldn't this (no sorting??) be an opportunity to create jobs?  
 I think the community would support it in the taxes and b) you might be able to offset the costs with recycling of valuable materials found in the trash.  
 I already recycle everything the transfer station accepts.  
 As I said above, the only thing that we don't recycle in some way is wet garbage (steamers' shells, fruit and vegetable peelings, coffee grounds, etc.). If we could recycle them at the dump, we could probably recycle everything that's recyclable.

## **#12. Which option (s) could you accept? Other/explain...**

DO NOT INCREASE taxes or sticker price!  
 I think it (Pay per Bag) is possibly the only way for people to pay attention to recycling.  
 Charge more per bag.  
 Curbside pickup.  
 Increase price per bag.  
 Change to town pickup for trash & recycle with yearly fee.  
 Free recycling sticker.  
 Enforcement of commercial haulers.  
 Modest sticker price increase.  
 Require the haulers (commercial) to recycle, collect bags of single stream recyclables.  
 Seek out new waste contractor at current prices.  
 Enforce waste ban and recycling with commercial haulers and builders.  
 I don't have enough information to select an option. What would pay per bag cost? How would increased attendant oversight help?  
 The pay per bag is really an incentive to increase the amount of bags. We already have too many.  
 Require landlords to recycle from short term renters.  
 Automated charge-by-weight / bulky item / construction debris system linked to my credit card.  
 Increase the cost of the pay per bag to those who don't purchase stickers.  
 Pass increased costs through hauler.  
 More options/more guidance/no taxes or added fees to taxpayers!  
 Split between tax and sticker cost.  
 Do NOT go to Pay Per Bag. This will decrease public recycling by emphasizing "the more I recycle, the more it costs me." (????)  
 Charge a higher price for unsorted mixed trash & recyclables.  
 Keep current system & DO NOT increase sticker price.  
 Need to know cost of increased systems/services.  
 Real estate taxes are pretty reasonable so maybe a slight increase? The pay per bag could work for trash but will be a disincentive to recycling.  
 Reduce town employee benefits, stop sewer system.  
 PAYT is the only logical option for a municipality -- especially if you have to shove it down the throats of non-recycling residents.

Depends on cost.  
Amount of usage should determine cost.  
Most of our summer residents use commercial haulers who do not recycle. Need to recycle that trash.  
Pay by weight at the transfer station-dual price.If recyclables are mixed charge more per pound than if recyclables are removed from trash.  
I think I pay a lot. The dump has made some changes which looks like they lowered cost.  
Is commercial hauler less expensive vs transfer station?  
Charge by Pound for trash.  
To answer I'd need to know how much more it will cost me.  
Town should work toward 0 waste, & support efforts ala manufacturer's redemption responsibilities for electronic "waste".  
People will not like the pay per bag system, Sandwich proves.  
I would actually pay \$200 per year for my sticker. I just want that gone.  
Provide recycle containers.  
Residents already have choice of commercial hauler.  
**HAVE COMMERCIAL HAULERS COMPLY.**  
**HAVE COMMERCIAL HAULERS COMPLY.**  
Large volumes of cardboard are disposed and not recycled. A large percentage of commercial trash is cardboard. Enforce recycling for residents and businesses that use commercial haulers.  
Require people who use commercial haulers to separate all recyclables.  
Shout or publicly humiliate the morons who don't recycle. They should be penalized.  
As I see it, the advantage of raising taxes to cover the cost is that most people can deduct their real estate taxes on their tax returns. However, couldn't that cause problems with the annual tax cap? The advantage of a pay per bag system is that the biggest users pay the most, rather than being subsidized by the smaller users.  
No more trash, recycle/compost a lot more.  
I came from Seattle, you need to look at their system. Commercial haulers have the power to bill you extra if they see recyclable items in your trash. It doesn't take too long then to get people's attention.  
Run the current transfer station more efficiently. i'm sure there are plenty of ways they can cut costs. Such as reducing the number of idle employees.  
Increased oversight with fines for throwing away recyclables.  
The first step is to make the commercial haulers come into compliance and offer home recycling bins to homeowners that hire such services.  
The present system of one attendant at the reception bldg. isn't enough there needs in season to be an attendant at the transfer bldg. watching the unloading of waste. There is a sign posted as to what is to be thrown into the trash and compliance must be increased, even if it means hiring an additional attendant and would have to be one with the authority to demand compliance by all to the posted sign.  
Typically those who follow carefully the guidelines will pay more because others have not been careful. Oversight increase would help train us all to do the right thing regularly.  
Regardless of household size or use of transfer station the trash we all generate is incredible paying a higher fee or tax is fine as long the trash is being properly disposed is the best solution..Those who object could retain a private hauler or in the case of a tax increase, don't we all pay for services that we don't or hardly use, i.e. police, fire.school, yet as a community we have decided these things are necessary and good for our community to maintain and support.  
Be sure commercial haulers recycle items that have been separated from trash.  
My home town doesn't require separation, which increases participation.  
This is a tough one. Even in your well managed facility, I am often shocked by the lack of compliance. It is amazing how many cans, bottles, metal, etc. I see going into the trash bins, and I'm just there three times a week for 3 minutes. The attendants see it all the time. A few years ago I overheard Steve and some of the other attendants ask "offenders" to please recycle items they were throwing in the trash, and the response from the "offenders" was not "Oh, yeah, of course!" It was more like, "Hey, I pay my fee

for this dump. I can do what I want and nobody's gonna' stop me." It really discouraged me (and you all dealing with this problem) that education and oversight are not the answer. It baffles me, but some people just don't know the importance of decreasing waste, or just don't care. I don't get it, but it is the very reason for this survey. What does a town do to improve its recycling rate when you (from my point of view) are already doing a great job, and it's still not enough?

### **#13. Other Comments?**

I have lived here for 20 years & everything seems to work ok as far as I am concerned. Transfer station is the best we've seen. Clean, efficient, well-marked. Would prefer to pay a higher fee and be allowed to dump anything! Wish the paper recycle area was separated into newspaper, scrap paper, food & product boxes, magazines. Audit of costs & return. Pay per bag if sticker price \_\_\_\_ (illegible - high?) I believe pay per bag will also help reduce waste; attendants are extremely efficient, always working, effective. Adopting a system used by other areas that allow all recyclable material to be disposed of at once - split into trash, all yard clippings/waste and all recyclables. No to pay per bag; keep up good work!; INCREASED attendant oversight is a good IDEA!, contractors get away with murder!, they should pay MORE and be limited in what they dump! I'm told that plastic containers 1 & 2 just go into the trash, not picked up from the transfer stations. I'm told bottles with labels are unacceptable. What about bottle caps (plastic) - are they recycled - why separated? Better communication that the Town's serious about NOT putting the prohibited items in the trash. I would love to be able to purchase at least 3 more recyclable blue containers to sort at home more neatly - could then convince person who drives the household waste to dump to deposit by correct bin area. Great helpful people at station - help with sorting or no need to sort would be WONDERFUL! Increasing taxes on town residents should never be an option until all means are considered; stop hurting families; stop tax increases. Have roadside pickup where the homeowner pays a monthly or yearly charge to be put on a route with a separate recycling truck that picks up plastic bins. Expand & simplify recycling area. Wellesley has a great transfer station & recycling center for Ideas that might work here.: Instead of a Gift Shop, have a Swap Shop with a larger area that is open whenever the facility is. People will come to browse & because it is free, items move quickly. It can be a draw & gets people into the recycling mindset. Make recycling pickup by independent haulers mandatory. Not realistic to expect summer renters to go to recycle center so 8-10 weeks of high consumption ends up in the trash. Please do NOT consider or implement a pay per bag program! If you make \$\$ by recycling heavy metal, why do you charge people for disposing of it? Why can't plastic caps be recycled? Our transfer station is well run and organized. Recycling is a behavioral change, don't punish all for actions of some. Look at costs for town to pick up all trash. Marion, MA does this after evaluating costs.

They showed it to be advantageous.

Excellent, well run, clean T.S. Great recycle articles in Chronicle.

I've noticed that many don't know what the word corrugated means. Noticed that many (estimate 1/3) do not remove plastic cap from bottles. Suggest bigger sign, or more instruction from staff.

I think you could build some kin of chute so that customers could deposit their white or green glass into pile. There seems to be no need to have staff break glass most of the day.

Good work.

Transfer station doing a great job! ...improvements to make it more user friendly.

I used to do more recycling but cannot handle anymore! Espec. Newspaper which weighs a lot!

I think were very lucky to have a 7 day a week transfer station (6 in winter) unlike other towns ... we burn our newspapers.

You are doing a good job now.

Recent consolidations of various plastic bins and of paper and newspaper bins has meant easier and faster disposal for me. Thank you! However, the paper bins are usually filled up to the openings, making it difficult to dump with out paper being blown outside the containers. Do the bins have top rather than side opening doors?

I am not sure we need to be open 7 days a week. It is convenient, but if that would allow us to save money and not increase sticker price, close Monday. And Wed. 5 days a week would be reasonable. Thank you for asking!

Haulers must recycle or others feel it is a waste of time.

Require recycling of trash haulers.

Make trash that comes to the transfer station (including commercial haulers) separated for recycling and removal/transfer. Have a table near the mixed paper containers for magazines...so they can be "recycled" to those who would like to read them...before they are recycled again.

Our household does everything possible to be responsible recyclers. So many residents don't care to recycle, increasing haulage fees for all residents. Some how they need to be held responsible as citizens, taxpayers, and responsible adults.

Have attendant at trash building inform people to recycle instead of dumping recyclables. Have commercial haulers recycle home trash like other towns and cities.

Price per bag may increase recycling by some, but will punish those who already recycle to a great extent. I imagine we will see much more illegal off site dumping if the fee for bag program is brought forth. Personally we produce only one bag per week for two people which is actually thrown in the transfer station.

Will we ever have single stream recycling as they do off Cape?

Pay per bag will encourage people to not recycle more, maybe burn or illegally dump. Its happening in other town.

Overall well managed.

I love Chatham's landfill. Its way better than any other landfill I've ever been to.

I wish my garbage man would pick up recyclables when picking up regular garbage\_\_more convenient.

Love transfer/recycle station. Continue to promote recycle. Reduce yard waste disposal costs.

I would put a bin for corrugated to to the left of windows for trash. There is always cardboard tossed in with trash. The recent changes make delivering recyclables easier.

Thank you.

Absolutely do not use pay per bag option, will increase burden to year round families.

Good luck! No increase real estate tax, no increase sticker price.

I am favorably impressed with the current system.

A great system!! We use it all and appreciate the opportunity to recycle and donate to gift shop.

The real way is to pass legislation that requires manufacturers to reduce packaging so we have less to recycle or dispose of. We don't need all the product hype that we are inundated with thru over packaging.

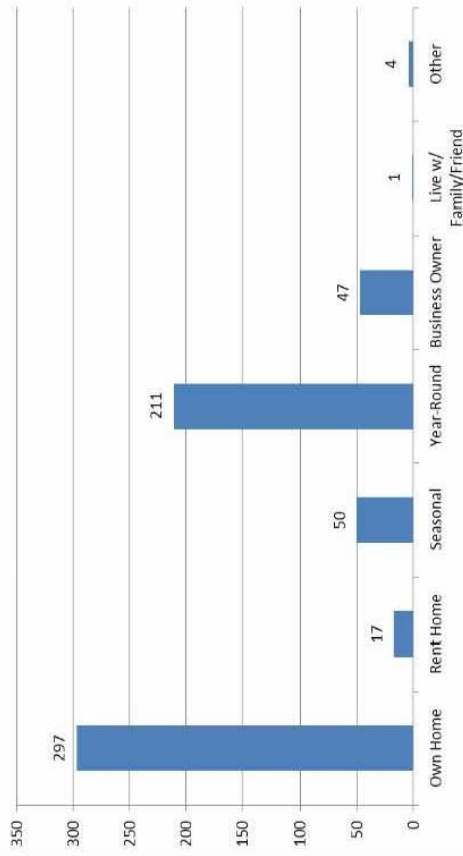
You are doing a very good job. People who are focused on saving our planet and are satisfied with Chatham's arrangement will have to face up to whatever financial adjustments they have to make as a regular factor in their budget.

I am very proud at the transfer station. It is clean, well organized and the attendants are most helpful. It is disappointing to see some individuals are too lazy to recycle or just don't care. Maybe an attendant is needed where people drop off garbage so cardboard, broken metal lawn chairs, etc. get the proper location.

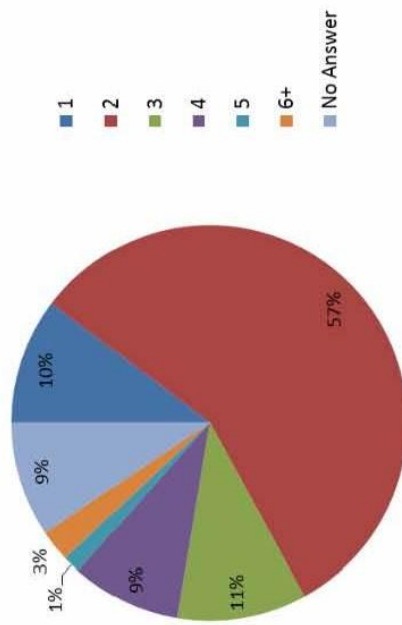
Great facility. I like the gift shop, wise use of space. Bones for dog as Jack did! But not really necessary. Place recycling bucket at Hardings, Cockle Cove and Pleasant St. parking lots. Near beach access for water bottles, cans, styrofoam and other recyclables. I place bottles I find on the beach next to the trash containers at Cockle Cove.

Do trash haulers recycle? Are commercial haulers paying a fair price?

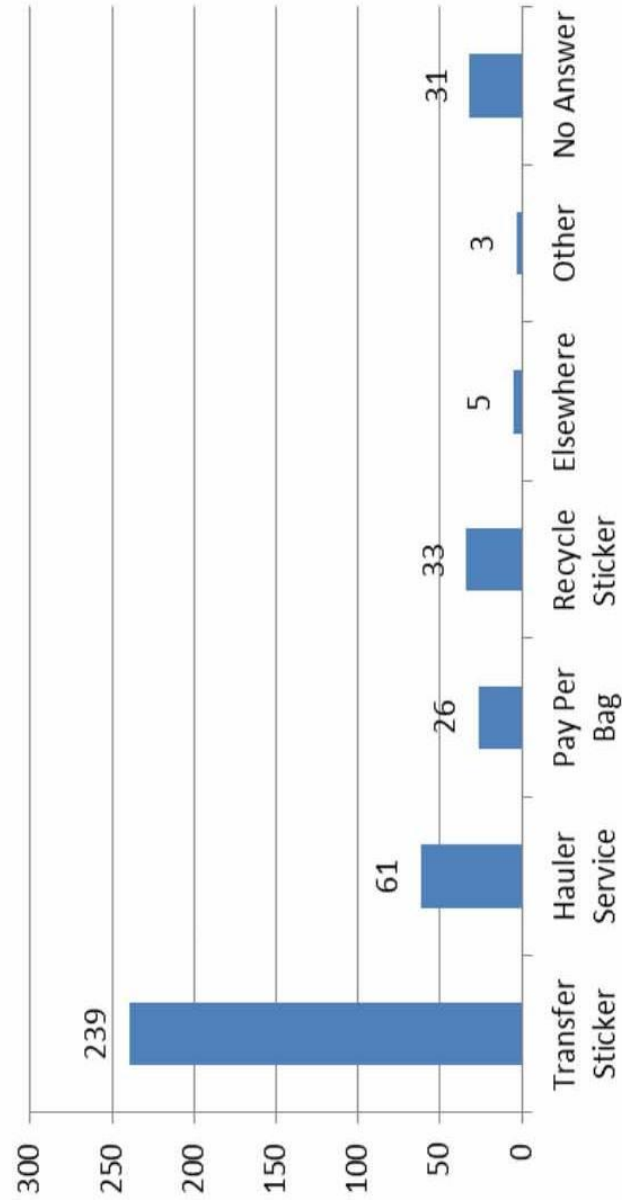
**Q1: Residence Information**



**Q2: Number of Residents**

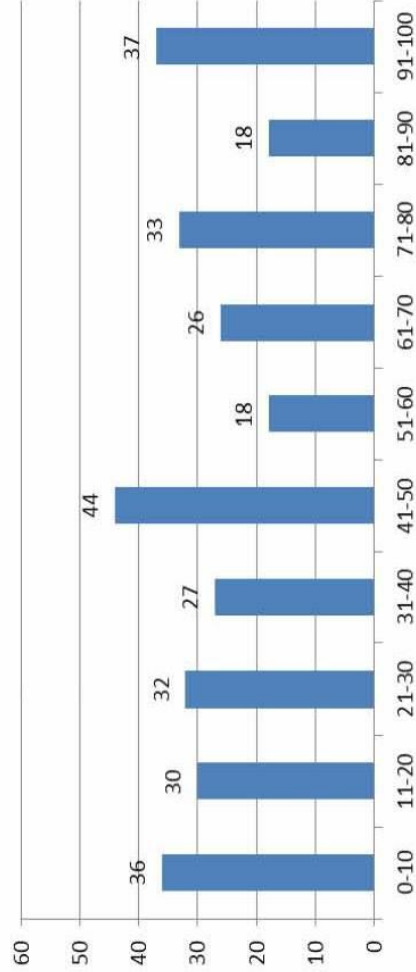


### Q3: Trash Disposal Methods

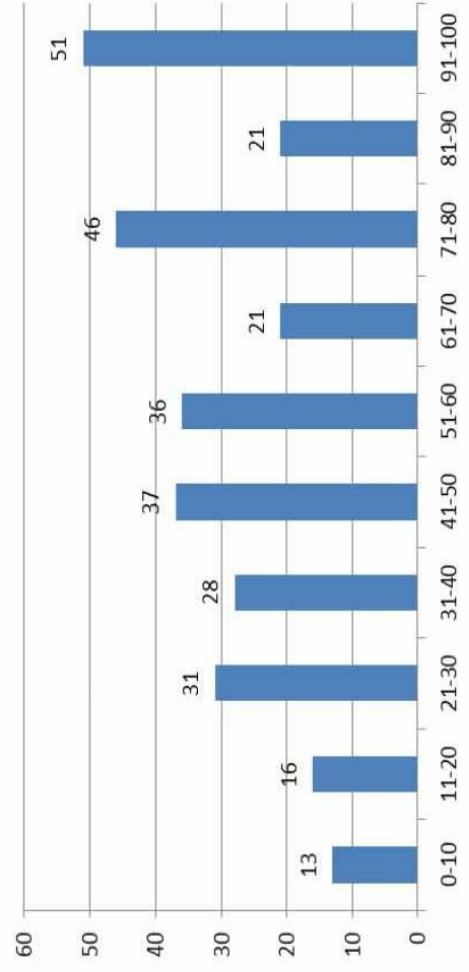


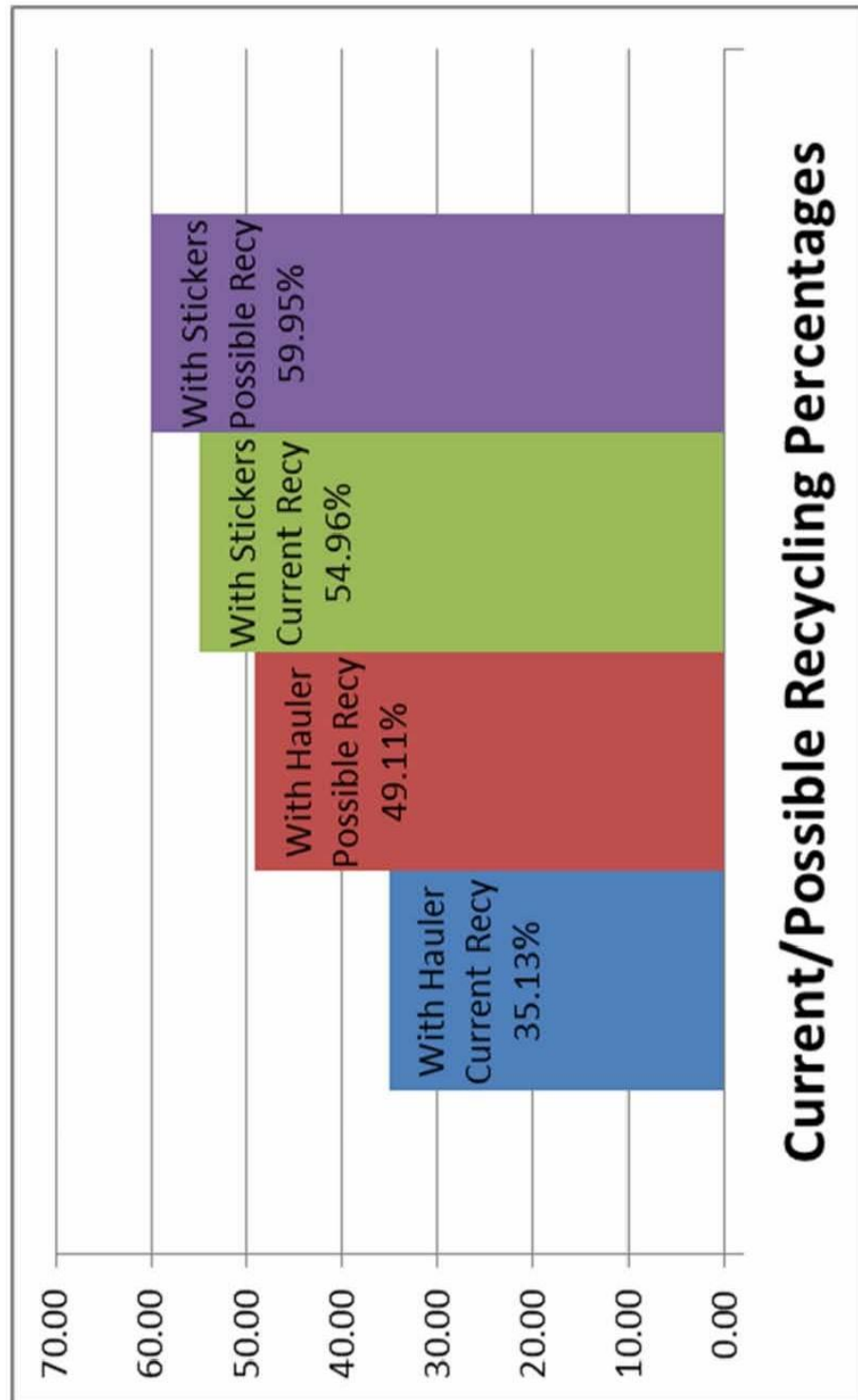


**Q4: Current Recycling Percentage**

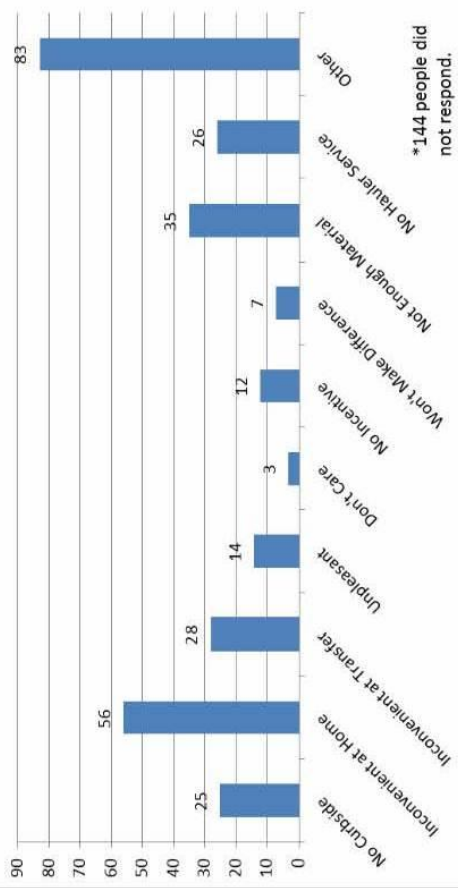


**Q5: Potential Recycling Percentage**

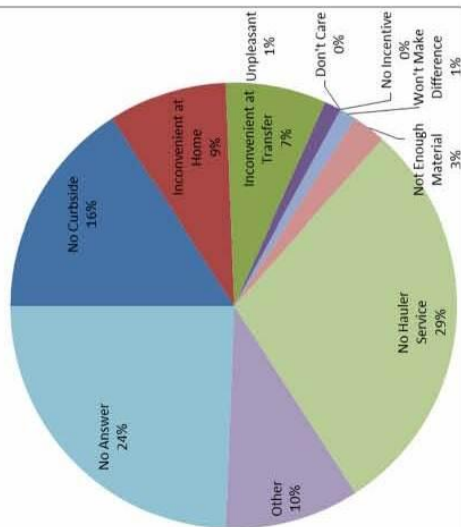




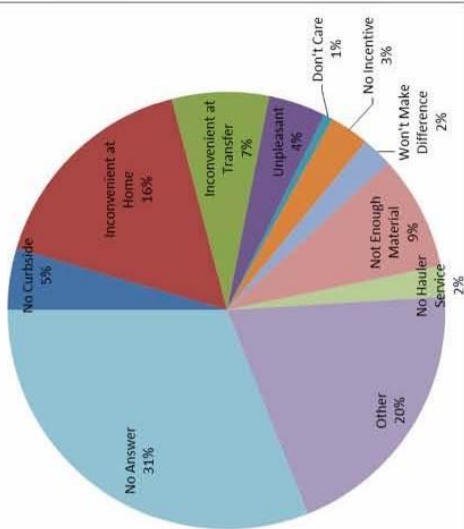
### Q6: Reasons you don't recycle more?

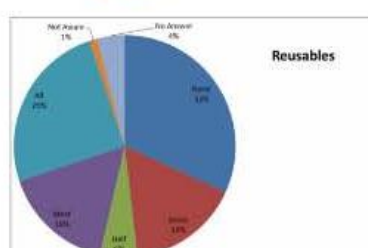
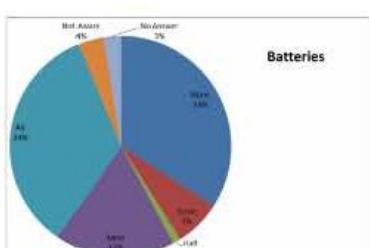
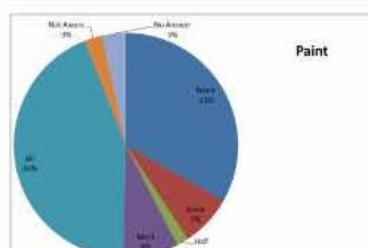
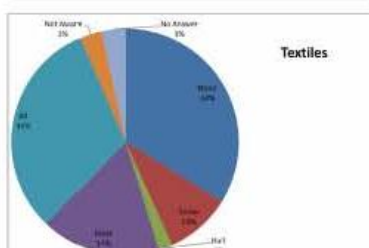
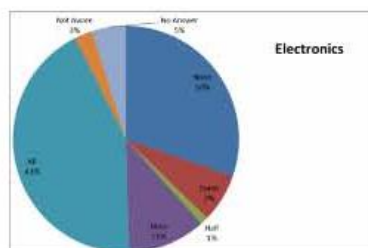
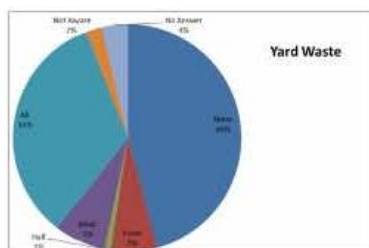
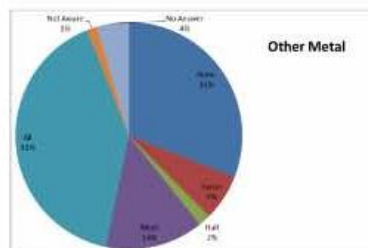
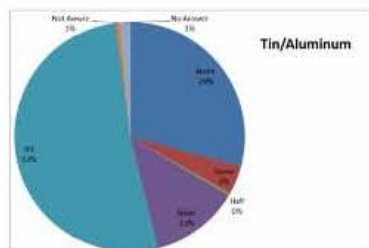
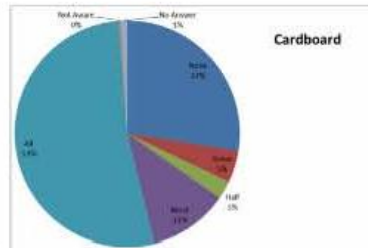
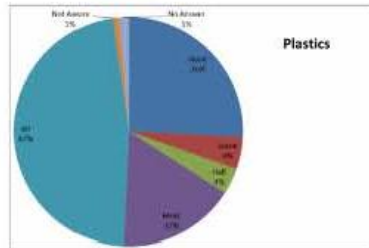
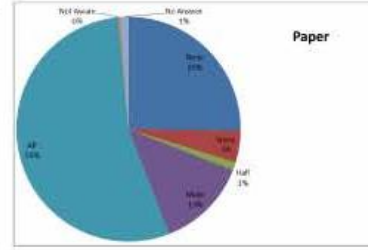
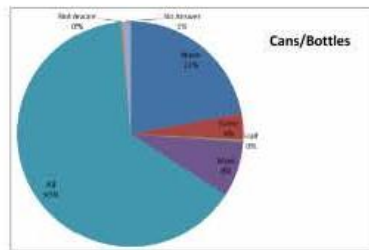


### Reasons you don't recycle more: (people with haulers)

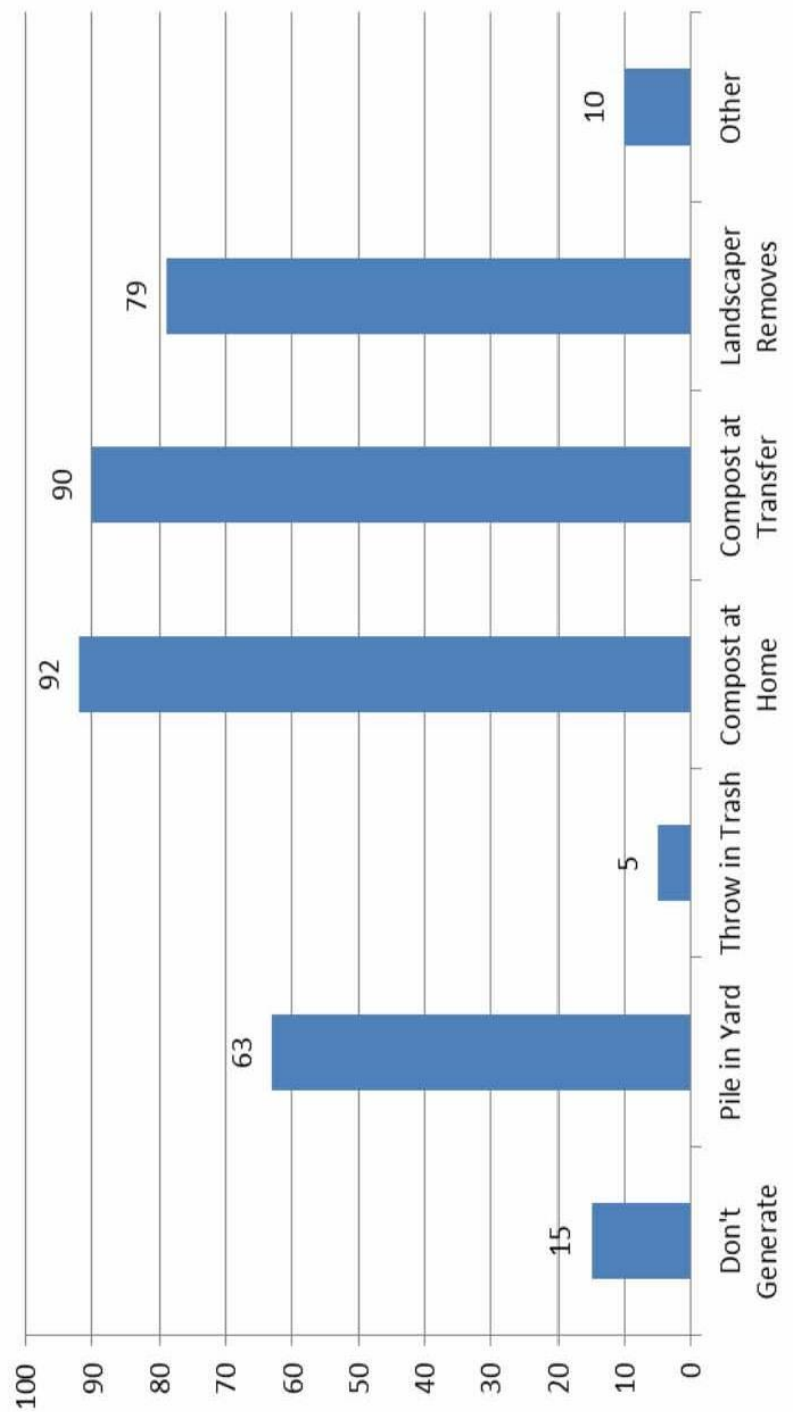


### Reasons you don't recycle more: (people with TS stickers)

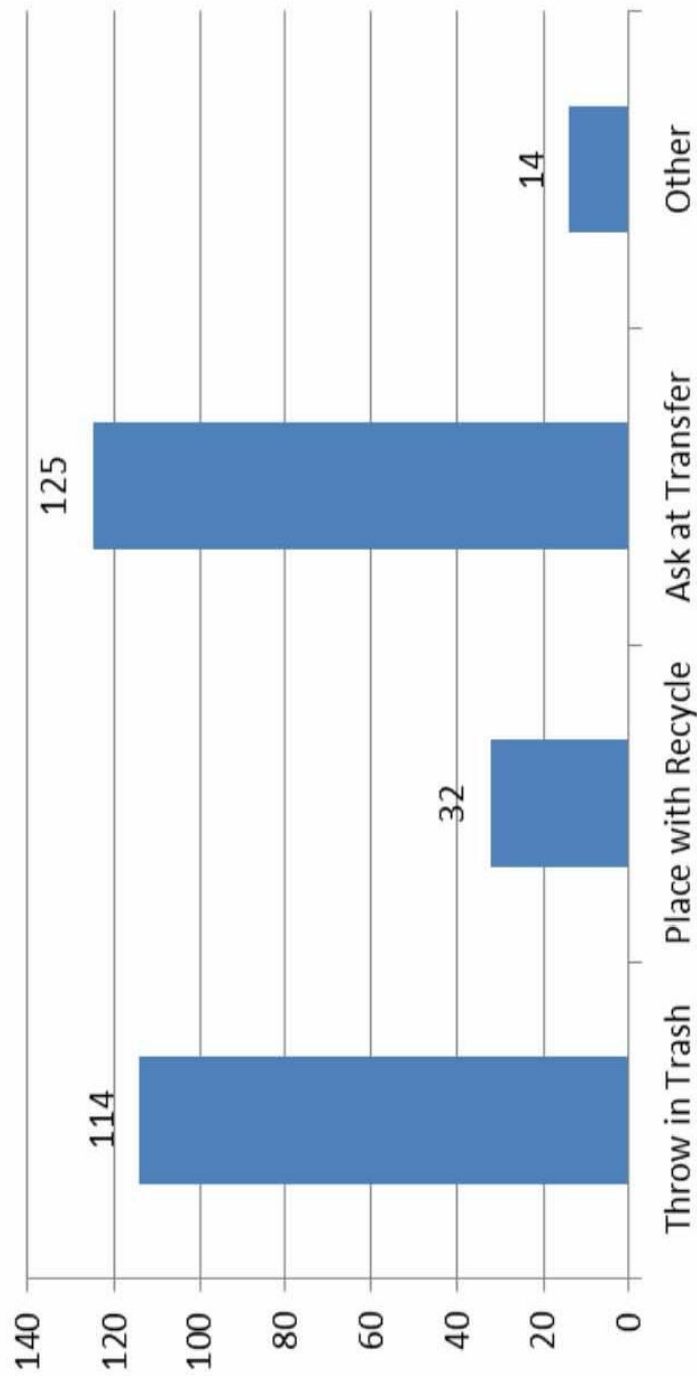




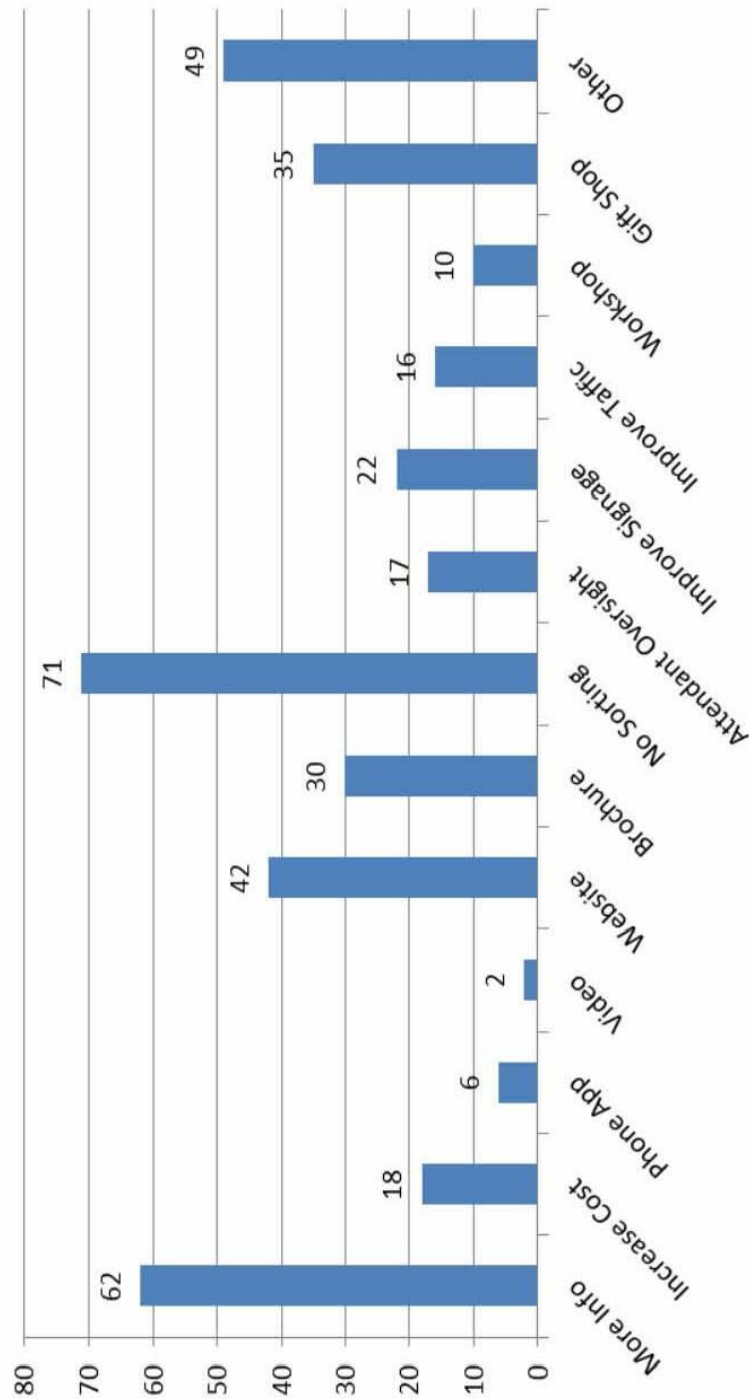
## Q8: Yard Waste Disposal



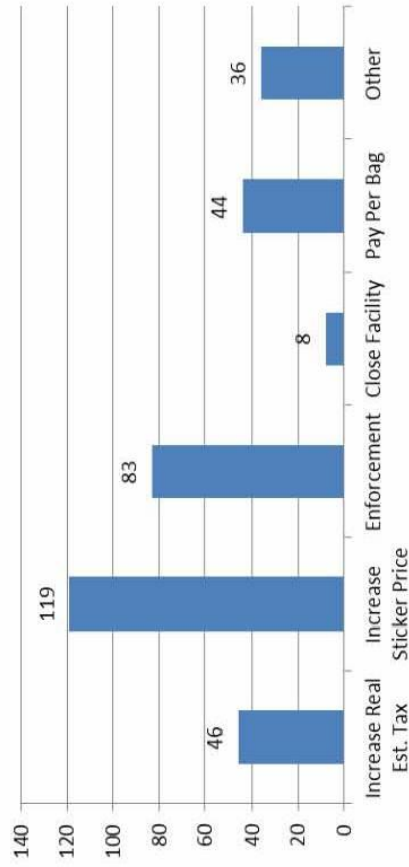
## Q10: Is it Recyclable?



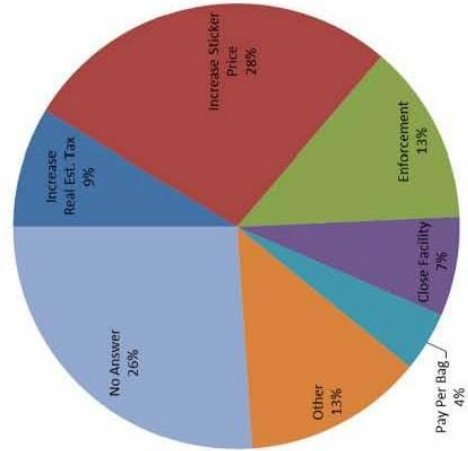
### Q11: What Would Help You Recycle More?



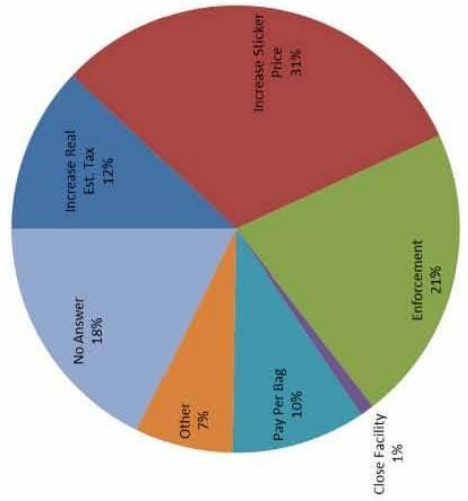
## Q12: Future Options



### Future Options with Haulers



### Future Options with Stickers





## **APPENDIX D — Nantucket, MA, Solid Waste Disposal:**

1. Nantucket's Solid Waste program is operated by an outside company, Waste Options Nantucket (home office Providence, RI). The program includes mandatory recycling, clear bags for all trash, regular checking of bags and a very large digester/composter. Its Enterprise Fund is significantly subsidized by their General Fund every year.

(Chatham's Solid Waste program operates regularly in the black, the surplus going *into* into the General Fund.)

2. Nantucket DPW Director Kara Buzanoski, 4/27/12:

"The funding model was set up so that the commercial users paid the bulk of the costs while the residential users pay little or nothing...the commercial dumping (Construction and Demolition-C&D) historically funded the entire operation due to the extensive building and renovation work being done here. In 2008 when the economy faltered, we found that the construction/renovation work cut back a great deal. As a result, the General Fund has recently had to subsidize the Solid Waste budget by several million dollars a year. I think that Nantucket will always have some sort of a General Fund subsidy. We are just beginning to review what options may help us to reduce the General Fund subsidy. One of the options is definitely PAYT."

3. Solid Waste Enterprise Fund Subsidies:

\$4,979,471: Transfer from General Fund 2010

\$4,983,660: Transfer from General Fund 2011

\$4,991,085: Transfer from General Fund 2012

\$5,192,450: Transfer from General Fund 2013

\$5,300,000: Proposed transfer from General Fund 2014

-source: [www.nantucket-](http://www.nantucket-ma.gov/pages/nantucketma_finance/fy14solidwasteprojection01082013.pdf)

[ma.gov/pages/nantucketma\\_finance/fy14solidwasteprojection01082013.pdf](http://www.nantucket-ma.gov/pages/nantucketma_finance/fy14solidwasteprojection01082013.pdf)

4.

\*Landfill had closed and the Town wanted to limit trash being shipped at high cost off island.

\*Mandatory clear bags, regularly checked by TS staff.

\*Glass is diverted to cover landfill which is considered recycling.

\*Regular recycling = 42%

\*\$1 million+ Digester removes 98% of remaining trash which is broken down into compost and sold.

This is how Nantucket achieves its very commendable recycling/diversion rate of 90%.

-Sources:

Kara Buzanoski, Nantucket DPW Director;

Stephen Wenzel, President Waste Options Nantucket;

[www.nantucket-ma.gov/pages/nantucketma\\_finance/fy14solidwasteprojection01082013.pdf](http://www.nantucket-ma.gov/pages/nantucketma_finance/fy14solidwasteprojection01082013.pdf)

"The Nantucket Story": <http://www.wasteoptions.com/nantucket.htm>

# **APPENDIX E**

## **Testimonials for PAYT**

**Compiled by Kathi Mirza,  
MA DEP Municipal Assistance Coordinator, May 2011**

### **Municipal Officials**

While a transition to a Trash Reduction/PAYT program is designed to reduce trash and save on program costs, we must also recognize the political implications associated with these programs. A number of Massachusetts officials offered the following comments about the programs they have implemented:

“The politics of the bag fee in Worcester were tough at the outset,” says Massachusetts Lieutenant Governor Tim Murray, who was Mayor of Worcester when the PAYT program was implemented. “But we were able to build some consensus on the issue because we talked about it in the larger context of what services people really value from their government, what they really cost to provide, and how we had to change if we were going to be able to deliver those services over the long term. I think everyone has a role to play as an environmental steward, and by moving to a pay-per-bag model in Worcester it helped people focus not only on the true cost of waste disposal, but also how we use resources across the board, from what we produce to what we buy and, ultimately, to what we dispose of,” Murray adds. “The system has been a great success for Worcester, both fiscally and environmentally.”

NOTE: Worcester reduced its trash tonnage by 25% in the first year of PAYT

Tim Murray, Massachusetts Lieutenant Governor  
From Waste Age, March 2011, page 48

“If the positive effects on the environment aren't enough of an incentive for a municipality to convert their rubbish & recycling program to the P-A-Y-T method....the monetary savings should certainly seal the deal. The numbers really do speak for themselves. Ashland has saved over \$600,000 in tipping fees since its P-A-Y-T program was implemented in July, 2006.”

NOTE: Ashland reduced its trash tonnage by 38% in the first year of PAYT

David Miller, DPW Office Manager  
Town of Ashland

“The toughest part of PAYT is getting started. After that it's a weekly lesson in trash/recycling awareness. Recycling goes up. Trash goes down. Gloucester has been doing this since 1991 and the residents here understand the system. It works. It's fair. It saves the City money. Going back to a life without PAYT would seem archaic.”

NOTE: Gloucester reduced its trash tonnage by 35% in the first 1.5 years of PAYT

Susan Mitchell, former Recycling Coordinator  
City of Gloucester

“In 1995, Taunton initiated a hybrid PAYT program. Residents got one free barrel of trash. If they needed to put out another barrel, they’d have to buy a .50 cent sticker for the extra bag or barrel. Just the idea that one might have to buy a sticker drove trash down about 25% and recycling up 65%. Even though we previously did the typical DEP mailings, calendars, etc., people now had the incentive to really read the recycling information. I can’t tell you how many still were under the 1980’s mentality as to what was recyclable. I can’t tell you how many people said ‘wow, I never knew that was recyclable.’ Start up costs and staff time required was extremely minimal. The best education tool was a simple advance poster in the windows of the stores that were going to be selling the stickers.

As experienced in hundreds, even thousands, of communities across the country, there were all the normal ‘prior’ objections while the program was being debated—unfair, they’ll be trash dumped everywhere, all that.... And there was the normal ‘post’ sentiment after—‘I’d rather not pay anything for trash, but if I have to, it’s fairer to pay based on how much one used’. Just like water, electricity, gas.....

The first week, only 200 stops had extra trash bags or barrels without stickers—98% compliance. Many stayed out the next day, but were brought in the following day (we attributed this to them wondering if there was a day delay in collection. Only two residents called saying it wasn’t their trash in front of their house. We said, no problem, we’d go through and undoubtedly find something with the name of the owner on it. Both were gone when we got there. There’s no need for trash police, which is always another pre-program fear.”

NOTE: Taunton reduced its trash tonnage by 23% in the first year of PAYT

Bill Fitzgerald, former DPW Commissioner  
City of Taunton

PAYT is the only equitable municipal program. Unlike the rest of municipal government, this is the one place where each constituent only pays for what they use. People can control the cost of the program themselves by recycling.

NOTE: North Attleboro reduced its trash tonnage by 30% in the first year of PAYT

Michele Bernier, Solid Waste Manager  
Town of North Attleboro

“The City of Brockton’s Pay-As-You-Throw Trash Program has, we believe, proven to be very successful and beneficial to all concerned. It has made residents more aware of the need and benefits of recycling, has eliminated large amounts of trash at the curb, has affected the way that residents place their trash out for pickup and has eliminated most of the great numbers of “move-outs” that the city was experiencing before the new program began.”

NOTE: Brockton reduced its trash tonnage by 29% in the first full year of PAYT

Robert D. Smith, former DPW Commissioner  
City of Brockton

Excerpt from Letter to MassDEP, December 26, 2002

"The PAYT Program resulted in a 50% reduction in solid waste generated in addition to a dramatic increase in recycling, bottom line is the Town of Dartmouth was able to reduce its sanitation budget by over \$400,000 in less than three years due to reduced manpower and expenses directly attributed to the PAYT Program."

NOTE: Dartmouth reduced its trash tonnage by 50% in the first year of PAYT

David Hickox, Director of Public Works  
Town of Dartmouth

## **The Public Response**

There have been a few occasions where residents have had the opportunity to VOTE on whether to maintain a recently implemented SMART/PAYT program. In other cases, constituents have offered their opinions about SMART/PAYT programs in their communities. Here's what the voters had to say:

### **Natick**

I organized and led the campaign to preserve Natick's Pay As You Throw program in 2003, after a referendum was called to overturn this program. PAYT was important to preserve town services and ensure curbside trash and recycling for Natick. I started Natick Saves, a committee to preserve PAYT, and in a high turnout local election in December 2003 (27% of voters) PAYT was upheld by 72% - 28%.

Although some consider it a "hidden tax," PAYT promotes personal responsibility and increases the rate of recycling. After a year of study, Natick started PAYT in July of 2003, and has since had a decline in trash tonnage of about 25%, with a similar increase in recycling. As a result, sanitation crews work four days per week instead of five, and now work on highway projects while Monday trash pickups have been eliminated.

Joshua Ostroff, Chair, Natick Board of Selectmen  
President, Mass. Municipal Association  
(from website <http://ostroff.net/achievements.html> )

### **Wrentham**

The Town of Wrentham implemented a PAYT program in FY2005. They refer to it as a Waste Reduction Program because the town provides the first 34-gal barrel of trash (under the tax levy), then PAYT bags are required for excess trash. Nine months after PAYT implementation, Selectmen placed a non-binding referendum on the town election ballot: "Should the town continue the pay-as-you-throw waste reduction program?" By an overwhelming 1,302 to 507 margin, 72 percent of the voters who cast their ballots answered "yes." See the complete case study at MassDEP's website:

<http://www.mass.gov/dep/recycle/reduce/wrenthampayt.pdf>

### **Littleton**

From a recent article about the new Littleton program where the residents voted to keep PAYT: "A petition backed by 264 signatures surfaced only 13 days after the program began. That petition led to the placement of an article on the fall Town Meeting warrant that sought to rescind the system, although Town Counsel Thomas Harrington said at that meeting that the vote on the petition article was not legally binding and would have existed only as a show of

residents' opinion and concern. Town Meeting voters defeated that petition by a 141-70 vote."

### **Brockton**

The sky did not fall in Brockton three years ago when the city went to "pay-as-you-throw" trash pick-up. The city is not strewn with trash, rats are not running wild and senior citizens didn't end up homeless because of increased fees. It is hard to call the program anything but a resounding success and supports the city's decision this week to extend its contract with Browning Ferris Industries for another two years. Here are some of the most important statistics that support the conclusion that it was the right decision to change the way the city views trash pick-up:

- In the year before the change was made, ending in June 2001, city households generated 37,400 tons of trash. In the year ending in June 2003, 26,700 tons of trash were picked up.
- The year before BFI was first granted its contract, 317 tons of plastic, glass and tin were recycled by city residents. The next year, that figure quadrupled to 1,279 tons.

Most of the landfills around the state have closed in the last decade. That makes it imperative to cut trash and encourage recycling. Brockton residents have done just that, with a little prodding from stricter trash pick-up rules. Before 2001, residents paid a meager \$110 annually to throw out almost as much as they wanted. Now they pay \$280 a year - still lower than most communities - and may put out one 32-gallon barrel and all the recyclables they want. If they have more trash than is allowed, they can set out extra bags at \$1 each. That is still reasonable. It did not escape notice that BFI used nine trash trucks and one recycling truck when it first acquired the contract in 2001. Now, there are seven trash routes and three recycling trucks.

The Brockton Enterprise

*"Brockton Trash Pick-up Has Been a Success", May 19, 2004*

### **Compiled by Paulette Fehlig, Chatham Solid Waste Advisory Task Force, December, 2012:**

"Concord, NH, saw its solid waste volume decrease nearly 50% and recycling increase 75% within three months of implementing PAYT—to the tune of a \$528,000 savings per year in reduced disposal costs for the city."

Huffington Post

*"Help Tame My Trash", April 15, 2010*

"Gloucester's Pay-As-You-Throw trash program is being credited with having kept more than 2,300 tons of rubbish out of the incinerator in 2009, while boosting recycling by 360 tons. The implementation of this program has already exceeded our expectations."

[www.GloucesterTimes.com](http://www.GloucesterTimes.com)

*"30% Savings on City Trash in First Year", March 7, 2010*

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"Maybe it's the wallet talking or maybe the switch raised everyone's awareness but the move by Marshfield to a Pay-As-You-Throw trash program has had a remarkable effect on the town's budget and the environment."

Debbie Sullivan Recycling Coordinator, Marshfield; WasteZero customer since 2010

## APPENDIX F – MA DEP State Contract

To: Municipal Recycling Coordinators  
From: Stefan Malner  
Re: State Contract for Imprinted Plastic Trash (Pay-As-You-Throw) Bags  
Date: November 11, 2011

Any Massachusetts municipality or political sub-division is eligible to purchase plastic trash bags to be used in Pay-As-You-Throw (PAYT) programs through the state contract FAC55. The contract is effective through November 11, 2012 with up to three additional extension periods of up to twelve months each ending on November 11, 2014.

There are currently three vendors on this contract: Waste Zero (formally Phoenix Recycling Inc.), Boxes and Bags Unlimited, and Mansfield Paper, a Bag Company Division. Each vendor offers different size and pricing; several different size bags are available: 8, 10, 14, 15, 16, 30, 33, 35 and 40 gallons. These bags are manufactured with 20% post-consumer recycled plastic content. Bags are made of 100% LDPE plastic and available in various colors. Bags are available in twist tie or drawstring style and packaged in quantities of 5 or 10 per sleeve. A customized program information insert is included in the sleeve price. Minimum order is 20,000 bags.

See below for more detailed information, including pricing, vendor contact information, available colors, and retail inventory distribution system information, and custom packaging.

Questions? Contact Stefan Malner at 617-348-4004 or [Stefan.malner@state.ma.us](mailto:Stefan.malner@state.ma.us)

**PAY-AS-YOU-THROW IMPRINTED PLASTIC TRASH BAGS**  
**CONTRACT # FAC55**  
**Expiration Date: November 11, 2011**

<b>Vendor Name</b>	Waste Zero
<b>Vendor Contact</b>	John Craig 508-717-7492 Fax – 774-233-0574 <a href="mailto:jcraig@wastezero.com">jcraig@wastezero.com</a>
<b>Available Colors (Standard)</b>	Blue, Orange, Purple, Green
<b>Other Colors</b>	Other colors available, call for pricing
<b>Standard Features</b>	<ul style="list-style-type: none"><li>• Drawstring or twist tie option on all bags</li><li>• Bulk/Clear sleeve packaging</li><li>• Pricing available for &lt;20,000</li><li>• No plate charge for initial orders &gt; 20,000 bags</li><li>• Informational insert with UPC at no additional cost</li></ul>

8 Gallon 250 bags per case	<b>Quantity</b>	<b>Per Bag – 5 Pk</b>	<b>Per Bag – 10 Pk</b>
	20,000	0.126	0.122
	20,001-100,000	0.122	0.118
	100,001-249,999	0.114	0.112
	250,000+	0.110	0.107
10 Gallon 250 bags per case	20,000	0.136	0.132
	20,001-100,000	0.130	0.127
	100,001-249,999	0.124	0.121
	250,000+	0.118	0.115
12 Gallon 200 bags per case	20,000	0.134	0.132
	20,001-100,000	0.130	0.127
	100,001-249,999	0.122	0.120
	250,000+	0.118	0.114
14 Gallon 200 bags per case	20,000	0.146	0.142
	20,001-100,000	0.140	0.135
	100,001-249,999	0.132	0.128
	250,000+	0.126	0.122
15 Gallon 200 bags per case	20,000	0.150	0.147
	20,001-100,000	0.144	0.141
	100,001-249,999	0.136	0.133
	250,000+	0.130	0.127
16 Gallon 200 bags per case	20,000	0.156	0.152
	20,001-100,000	0.148	0.145
	100,001-249,999	0.140	0.137
	250,000+	0.134	0.131

30 Gallon 200 bags per case	20,000	0.234	0.231
	20,001-100,000	0.228	0.224
	100,001-249,999	0.220	0.216
	250,000+	0.210	0.206
33 Gallon 200 bags per case	20,000	0.258	0.254
	20,001-100,000	0.248	0.244
	100,001-249,999	0.236	0.232
	250,000+	0.224	0.222
35 Gallon	20,000	0.258	0.256

200 bags per case	20,001-100,000	0.250	0.248
	100,001-249,999	0.240	0.238
	250,000+	0.230	0.228
40 Gallon 200 bags per case	20,000	0.288	0.285
	20,001-100,000	0.282	0.278
	100,001-249,999	0.272	0.269
	250,000+	0.262	0.260
<b>Optional features</b>	<ul style="list-style-type: none"> <li>For small order requirements (less than 20,000), there will be a one time set up / small order fee of \$1000.00 (to cover plate charges and small run setup/changeover). For all subsequent orders the set up fee will be \$750.00</li> <li>Other colors available</li> </ul>		
<b>Retail Inventory Distribution Service</b>	<ul style="list-style-type: none"> <li>Full service retail inventory management / distribution system available</li> <li>Available for all bag sizes</li> <li>Pricing is dependent on the program options and bag size</li> <li>Prices range from \$0.03 to \$0.05 per bag (in addition to base bag cost)</li> <li>Contact vendor for details</li> </ul>		

Notes on Prices: All listed prices include delivery within 30 days from receipt of order for orders under 250,000 and within 60 days from receipt of order for orders over 250,000.

### **PAY-AS-YOU-THROW IMPRINTED PLASTIC TRASH BAGS**

**CONTRACT # FAC55**

**Expiration Date: November 11, 2011**

<b>Vendor Name</b>	Boxes and Bags Unlimited		
<b>Vendor Contact Information</b>	Jeff Marcotte, (800) 696-6702 or (207) 795-6702, (207) 782-9597 (fax)		
<b>Available Colors</b>	Clear, yellow, light blue, light green, dark blue, dark green orange, white, black and grey		
<b>Optional Features</b>	<ul style="list-style-type: none"> <li>Twist Tie options for all bags</li> <li>Bulk/Sleeve/Sleeve with insert</li> <li>Below pricing is one time drop shipment</li> </ul>		
<b>Bag Size</b>	<b>Quantity</b>	<b>Price- 10 pks</b>	<b>Price- 5 pks</b>
14 Gallon (24" x 31") Gauge: 1.5mil	20,000 (minimum order)	\$0.150	\$0.1676
	20,001 – 100,000	\$0.150	\$0.1676
	100,001 – 249,999	\$0.140	\$0.1578



	250,000 +	\$0.135	\$0.1530
33 Gallon (33" x 39") Gauge: 1.5mil	20,000 (minimum order)	\$0.234	\$0.2520
	20,001 – 100,000	\$0.234	\$0.2520
	100,001 – 249,999	\$0.218	\$0.2340
	250,000 +	\$0.210	\$0.2260
<b>Packaging</b>	Coreless rolls of either 10 or 5 bags with printed insert 40/5 roll cs or 20/10 roll cs		
<b>One time artwork charge</b>	One time charge \$150.00 need to supply camera ready artwork		
<b>Inventory control system</b>	<ul style="list-style-type: none"> <li>• Bag-Management Program available.</li> <li>• Pricing is based on a program by program basis but not to exceed \$.03 per bag (in addition to the cost of the bags).</li> <li>• Contact vendor for pricing and details.</li> </ul>		
<b>Additional Notes</b>	<ul style="list-style-type: none"> <li>• Requires 45 day lead time for initial order</li> <li>• Contact vendor for information about pricing for 10 or 30 gallon bag option</li> <li>• The following prices represent the <b>maximum price</b> for FY09.</li> <li>• <b>Call for current pricing, cost could be significantly less</b></li> </ul>		

Notes on Prices: All listed prices include delivery within 30 days from receipt of order for orders under 250,000 and within 60 days from receipt of order for orders over 250,000.

**PAY-AS-YOU-THROW IMPRINTED PLASTIC TRASH BAGS**  
**CONTRACT # FAC55**  
**Expiration Date: November 11, 2011**

<b>Vendor Name</b>	Mansfield Paper Company – Bag Company Division
<b>Vendor Contact Information</b>	Scott Parent 380 Union Avenue West Springfield, MA 01090  Phone: 800-225-4641 Email: <a href="mailto:rsp@mansfieldpaper.com">rsp@mansfieldpaper.com</a>
<b>Available Colors</b>	Any requested liner color and most any contrasting ink color
<b>Optional Features</b>	Promotional materials available upon request

<b>FY09 Max Pricing</b>	The following prices represent the <b>maximum price</b> for FY09. <b><i>Call for current pricing, costs could be significantly less.</i></b>		
<b>Bag Size</b>	<b>Quantity</b>	<b>Price- 10 pks</b>	<b>Price- 5 pks</b>
<b>TWIST TIE</b> 14 Gallon (24" x 28") Gauge: 1.5mil	20,000 (minimum order)	\$0.134	\$0.138
	20,001 – 100,000	\$0.126	\$0.130
	100,001 – 249,999	\$0.123	\$0.127
	250,000 +	\$0.1112	\$0.123
<b>TWIST TIE</b> 33 Gallon (33" x 35") Gauge: 1.5mil	20,000 (minimum order)	\$0.236	\$0.2432
	20,001 – 100,000	\$0.2208	\$0.2276
	100,001 – 249,999	\$0.2164	\$0.2234
	250,000 +	\$0.2108	\$0.2178
<b>HANDLE TIE</b> 14 Gallon (23" x 31") Gauge: 1.5mil	20,000 (minimum order)	\$0.1642	\$0.1686
	20,001 – 100,000	\$0.1608	\$0.165
	100,001 – 249,999	\$0.1572	\$0.1616
	250,000 +	\$0.1538	\$0.1582
<b>HANDLE TIE</b> 33 Gallon (33" x 39") Gauge: 1.5mil	20,000 (minimum order)	\$0.2816	\$0.2892
	20,001 – 100,000	\$0.2752	\$0.2832
	100,001 – 249,999	\$0.2694	\$0.277
	250,000 +	\$0.2632	\$0.2708

<b>Packaging</b>	<ul style="list-style-type: none"> <li>• All bags are packed in custom printed sleeves with Program/UPC information</li> <li>• Bags are in 10 pack (25-sleeves/case) or 5 pack (50-sleeves/case) with 250 bags per case. Bulk pack is available at cost savings.</li> </ul>
<b>One time artwork charge</b>	<ul style="list-style-type: none"> <li>• One time plate charge of \$150 for new orders and/or print changes.</li> <li>• Municipalities may choose to have business "advertising" printed on liners at no extra cost based on receipt of artwork.</li> <li>• Sleeves are printed with municipality name, program info and UPC code at no extra charge.</li> </ul>
<b>Inventory control system</b>	<ul style="list-style-type: none"> <li>• Pricing is dependent on program options and bag size; based on 250 bags per case (50 sleeves per case or 25 sleeves of 10 per case)</li> <li>• 1-5 cases = \$12.50/ca (\$.50/bag)</li> <li>• 6-9 cases = \$9.00/ca (\$.36/bag)</li> <li>• 10-19 cases = \$7.50/ca (\$.30/bag)</li> <li>• 20 up to skid = \$5.00/ca (\$.20/bag)</li> <li>• Full skid = \$3.00/ca (\$.12/bag)</li> <li>• Contact vendor for details</li> </ul>
<b>Additional Notes &amp; Services</b>	<ul style="list-style-type: none"> <li>• Contact vendor for information about pricing for 16 or 30 gallon bag option</li> <li>• Waterproof Stickers/Labels are an alternate to printed trash liners. Also Window Stickers for use on Vehicles to enter Town/City Transfer Station</li> </ul>

Notes on Prices: All listed prices include delivery within 30 days from receipt of order for orders under 250,000 and within 60 days from receipt of order for orders over 250,000.

## APPENDIX G - Illegal Dumping

To: Wellfleet Board of Selectman, Board of Health, Recycling Committee, Finance Committee, Tim King, Mark Vincent, Paul Lindberg, Janet Drohan, Richard Willecke, Hillary Greenberg Lemos, Lydia Vivante, Dave Quinn;

On Wednesday, Oct. 17th I attended a meeting in Orleans regarding Pay As You Throw (PAYT). It was sponsored by 'Waste Zero', and the guest speakers were Dave Hickox, Diector of Public Works, Dartmouth and Kevin Cafferty, Town Engineer, Scituate. There were about 25 attendees representing the lower cape towns. Selectman Dennis Murphy, Janet Drohan of the Board of Health, Paul Lindberg of the DPW, and I represented Wellfleet.

Dartmouth is a town of 34,000 people with a large coast line along Buzzards Bay. Dartmouth implemented PAYT in 2007, offers curb side pick up for \$80 year and drop off at Transfer Station for \$50 year. Bags are \$2 for a 33 gallon, \$1 for 15 gallon.

Scituate has 18,000 people and their coast line is Cape Cod Bay. Scituate implemented PAYT in 1999 and offers Transfer Station services like Wellfleet. The cost is \$80 year. Bag prices are \$2 for 33 gallon, \$1 for 15 gallon.

On Thursday I sent follow up questions via email regarding illegal dumping of household trash to Dave Hickox of Dartmouth and Keven Cafferty of Scituate. Below are their responses.

=====

(From John Morrissey to Dave Hickox)

Several people in Wellfleet are concerned about the effect PAYT might have on illegal disposal of household solid waste in our open areas or in public trash cans at our beaches. Wellfleet is a small town with a very significant seasonal population. We have many remote wooded areas and we also have 52 public trash cans located at our beaches and ponds.

1. Does Dartmouth have a significant seasonal population?
2. Does Dartmouth have remote areas where people can dump their household trash?
3. Have you seen an increase in the dumping of household trash in remote areas that you contribute to PAYT?
4. Does Dartmouth have public trash cans in remote areas?
5. Have you seen an increase in the illegal dumping of household trash in public trash cans due to PAYT?

=====

(Response from Dave)

Hello John,

1. We have a seasonal population although the majority of our seasonal population are located in private gated communities, and do not participate in the PAYT program as they are serviced by private haulers. In general, the seasonal residents we do service find the program fair since they only pay for the bags they place at the curb, and realize our Base Fee (\$80/yr.) includes a transfer station permit and unlimited curbside recycling.
  2. Dartmouth is a large town (64 sq. miles), we have significant open space and rural areas, illegal dumping of residential solid waste has not been an issue in Dartmouth. Most of our illegal dumping consists of construction demolition and bulky items, and appliances that required payment at our transfer station.
  3. No (responding to increase in illegal dumping in remote areas)
  4. We have public trash cans at our beaches, parks and public boat landings. To my knowledge, disposal of residential solid waste at these locations has not been an issue. As I noted at the roundtable Wednesday, illegal disposal of residential solid waste in most cases can be traced back to the waste's owner since the waste stream will most likely have a name and address on disposed mail or shipping tags.
  5. No. (responding to increase in illegal dumping in town trash cans)
- Illegal dumping of residential (domestic) solid waste has not been an issue with the PAYT Program in Dartmouth. The program has been an environmental and financial success. I often make the analogy of the PAYT bags to water, electric and gas meters. How much additional water, electric and gas would you use if it were not metered?? The PAYT bag system drives the recycling.

Dave Hickox

=====  
(From John Morrissey to Kevin Cafferty)

Several people in Wellfleet are concerned about the effect PAYT might have on illegal disposal of household solid waste in our open areas or in public trash cans at our beaches. Wellfleet is a small town with a very significant seasonal population. We have many remote wooded areas and we also have 52 public trash cans located at our beaches and ponds.

1. Does Scituate have a significant seasonal population?
2. Does Scituate have remote areas where people can dump their household trash?
3. Have you seen an increase in the dumping of household trash in remote areas that you contribute to PAYT?
4. Does Scituate have public trash cans in remote areas?
5. Have you seen an increase in the illegal dumping of household trash in public trash cans due to PAYT?

=====

(Response from Kevin)

Hi John,

1. Yes, Scituate has a large increase in population in the summer especially in our Humarock Area

2. Scituate does have open spaces and open lots where people could dump trash.

3. In talking with our Highway Superintendent there is not a lot of trash dumped on the side of the road or in remote areas of town. Residents do watch out for it though and will report people if they see it going on.

4. Scituate does have public Trash Cans at the Beaches and around Town. There will always be people who slide trash into the barrels but if and when residents notice it people report them. Our crews also at times will open up the bags and look for bills or junk mail if we see anything that looks suspicious.

5. No, we have not seen a huge increase in illegal dumping as I said some people will always try to buck the system but it is not as bad as you would think. The residents look out for this and as I said in the presentation we put dumpsters at the beach and they were not abused as much as I thought they would be.

Kevin

=====

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John T Morrissey

**SERA**

Skumatz Economic Research Associates, Inc.  
Boulder Office: 762 Eldorado Drive, Superior, CO 80027  
Phone: 303/494-1178 FAX: 303/494-1177  
email: skumatz@serainc.com; web: serainc.com; payt.org

**DATE:** August 2010  
**TO:** Rachel Harlow-Shalk, City of Westminster  
**FROM:** Lisa Skumatz and Juri Freeman, SERA Inc  
**SUBJECT:** Illegal Dumping and Pay-As-You-Throw

Invariably, one of the first questions municipalities ask about pay-as-you-throw is its impact on the incidence of increased illegal dumping. Overall, PAYT does *not* lead to increased illegal dumping. A series of surveys and interviews with hundreds of communities conducted over the past two decades by SERA Inc. have found that the vast majority of communities that adopt PAYT do not report increased incidences of illegal dumping. Communities report that illegal dumping is a "perceived" barrier and not an actual barrier. Although many communities report that they thought illegal dumping would increase with PAYT only a small portion actually do see increases. Virtually all of the communities that report an increase of illegal dumping after implementing PAYT also report that illegal dumping returns to pre-PAYT levels within one to three months.

Overall, PAYT does *not* lead to increased illegal dumping.

#### SERA 2010 National Community Survey

Communities with PAYT programs in place were asked to rank illegal dumping before and after implementing PAYT on an A to F scale (where an A means that there is no incidence of illegal dumping and F means it is a huge problem). After implementation, none of the communities with PAYT reported that illegal dumping was a *huge problem* and those that reported it was a D decreased from 21% to 14% after implementing PAYT.

#### Results of 2010 Community Survey

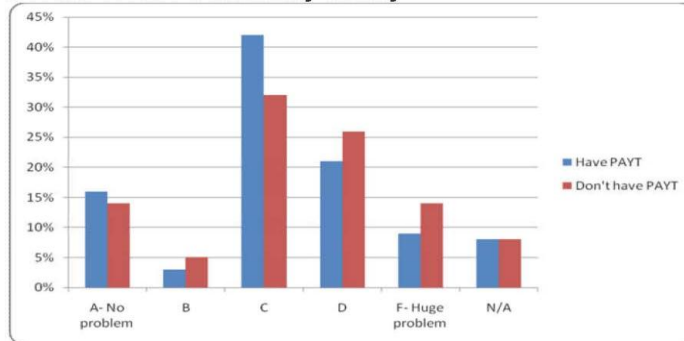
Ranking	Before PAYT	After PAYT
A- No problem at all	0%	0%
B- Very slight issue	21%	43%
C- Medium problem	7%	7%
D- Large issue	21%	14%
F- Huge Problem	7%	0%
Don't know / wasn't there	43%	28%

#### SERA 2009 National Community Survey

In a 2009 survey SERA researchers asked communities to report whether or not they had PAYT and asked communities to rank illegal dumping. There was very little difference in the issue of illegal dumping

between communities with and without PAYT. Slightly higher proportions of communities *without* PAYT reported that illegal dumping was a large or huge problem. The results of the 2009 community survey are displayed in the figure below:

**Results of 2009 Community Survey**





## Illegal Dumping

Illegal dumping is one of the most common concerns among municipal officials and residents when considering a PAYT program. In practice, however, incidences of illegal dumping have not been shown to increase after PAYT is implemented in the majority of cases. In 2010, a national survey by SERA of more than a 1000 communities with PAYT across the country showed that “illegal dumping was more of a ‘perceived’ barrier than an actual barrier.”<sup>9</sup> The results of the SERA survey as shown in the table below:<sup>10</sup>

Ranking	Before PAYT	After PAYT
A- No problem at all	0%	0%
B- Very slight issue	21%	43%
C- Medium problem	7%	7%
D- Large issue	21%	14%
F- Huge Problem	7%	0%
Don't know / wasn't there	43%	28%

The survey also found that in almost all communities that experienced an increase in illegal dumping after PAYT, the dumping problem went away after 3 months of the PAYT program.

In Massachusetts, the DEP collects data from communities that have implemented PAYT regarding their program structure, pricing, and whether or not illegal dumping has been a problem. Of the 136 communities with PAYT in Massachusetts, only 18 reported that they had at least some illegal problems, or 13% of PAYT programs. However, the Massachusetts DEP survey is not as extensive as the SERA survey and it is unknown whether or not they had an illegal dumping problem before the program went into effect or whether the problem went away after several months as suggested by the SERA results. 38 communities did not provide any information about illegal dumping at all.

Illegal dumping?	Number of Communities	Percent of Total
No	80	58.8%
no data / did not report	38	27.9%
Some	4	2.9%
Yes	14	10.3%
Grand Total	136	100.0%

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<sup>9</sup> Skumatz, Lisa A., Pay As You Throw (PAYT) in the US: 2006 Update and Analysis. Skumatz Economic Research Associates, Inc. (SERA). Sponsored by EPA Office of Solid Waste. 2006

<sup>10</sup> Skumatz, Lisa, A. *Illegal Dumping and Pay-As-You-Throw*, Skumatz Economic Research Associates. August 2010.